ENGINEERING NEWS-RECORD

pavers in tandem lay 12-in. thick runways on New York's 4,500 acre Idlewild Airport.

THEY LIGHTED UP A VALLEY

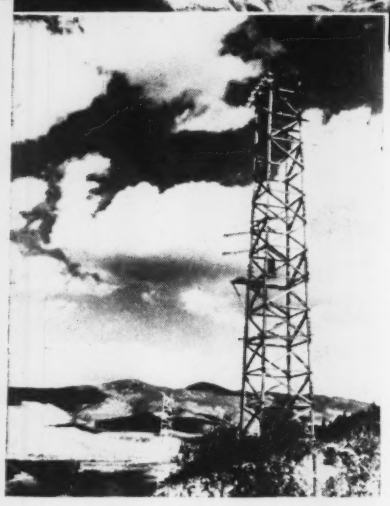
. . and speeded up a job with safety

● The builders of Green Mountain Dam used a stationary system of lighting to illuminate the entire valley. Thus there was no need to string wires and install lights as construction of this earth-filled dam proceeded.

A day and night working schedule was maintained over the entire construction period of five years. Lighting facilities were independent of the progress of the work, approach roads were adequately illuminated so materials were moved safely and quickly to and over the site, and maintenance expense and expensive delays were minimized.

The Warner Construction Company of Chicago, accomplished this by placing the illumination problem in the hands of G-E lighting specialists, who studied the proposed project and came up with this novel system of illuminating the entire site. Five permanently located batteries comprising a total of 70 enclosed floodlights illuminated an area of 1,000,000 square feet. These G-E floodlights, with polished reflectors and clear glass doors, using 1500-watt, 125-volt Mazda lamps, were mounted on timber towers and poles approximately 300 feet above the foundation of the dam, and 40 feet above the finished crest. They were adjusted only periodically as the dam was brought up. Lights were controlled by a photo-electric cell that turned them on in the evening as natural light intensity dropped.

Night view of coffer-dam construction. Light from the five main batteries in the foreground enabled night shifts to accomplish just as much as day shifts.



(Left) Two 80-foot timber towers on the south, or left, abutment of the dam, approximately 300 feet above the foundation of the dam.

A U.S. Bureau of Reclamation project, Green Mountain Dam is one of the largest earth- and rock-filled dams in the world. Power generated here has helped supply Colorado's war industries. Good lighting was probably one of the important factors in preventing night-shift accidents and delays.

The General Electric Illuminating Laboratory studies outdoor lighting problems of all types, makes illumination tests of equipment, surveys projects for better outdoor illumination, and offers a thoroughly competent service that is always available upon request. General Electric Company, Schenectady 5, New York.

Two small G-E floodlights at the power-house site supplemented over-all lighting that was provided by the main batteries.

Looking down 300 feet to the coffer-dam construction. A battery of 10 G-E floodlights (Type L-68) in foreground.

GENERAL ELECTRIC

655-47-3000

BUY WAR BONDS

The Week In Engineering and Construction

ENGINEERING NEWS-RECORD • JUNE 21, 1945 • VOLUME 134 • NUMBER 25

Lack of engineers is seen for postwar operations

American Council on Education and National Research Council issue joint report on shortage of engineering, scientific and medical personnel

A serious postwar shortage of engineers, scientists, physicians and dentists is visualized in a special bulletin just issued jointly by the Office of Scientific Personnel of the National Research Council and the American Council on Education. The report was prepared with the cooperation of professional associations in the several fields covered.

Estimated shortage

Specific figures for the anticipated shortage of physicians are given, but no estimate is made for engineers. The nearest approach is inclusion of a report prepared by Dean A. A. Potter of Purdue University in which the shortage is estimated at "many times" a shortage of 5,806 engineers arrived at by analysis of 120 replies to a questionnaire sent to 400 industries with which Purdue had placed its graduates.

Grouping scientists and engineers, a study made by the National Roster of Scientific and Specialized Personnel and published in May of last year is quoted as finding that the "accumulated total need of American industry is likely to be 40,000 scientists and engineers by June, 1944, about the number graduated in 18 months by American colleges and universities in normal times. This means that industry was already a year and a half behind at that time. . . . It is now one more year behind."

Industrial needs

"The extent to which industry and the life of the country generally are dependent on highly trained personnel is very great and the attendant change in American industrial and commercial processes has been so rapid that full appreciation of the situation is rare among the people and in government. There has been a steady flow of scientific and engineering personnel into industry which has again and again doubled the numbers of technologists employed in the past two or three decades."

"Almost every type of industry has expanded its use of technically trained personnel although in some cases the expansion has been greater than in others. But on the whole the absorption of scientists and engineers has been at a very rapid rate as American industry has steadily exploited the fruits of technological advances, and processes have become more exact and intricate."

"The war has not stopped nor reversed this technological trend. In some directions technological development has been stimulated by the war, in others it has been slowed down. For complete recovery the trend must be recaptured in all fields. This is the job of reconversion, to regain the momentum of our technological advance.

"It is recognized that the brunt of this job of reconversion as well as the job of exploiting scientific and engineering advances for the purposes of new production (and job-creation) will fall on research and development facilities. To maintain its way of life the United States must have an expanding economy which in the modern scene means expanding and alert development facilities, in short, increased numbers of high grade scientists and engineers with adequate facilities at their disposal.

(*Continued on page 6*)

Two pavers lay 12-in. thick runway at Idlewild Airport

On New York's 4,500-acre Idlewild Airport a double-drum 34-E paver lays the lower 8 in. of concrete, a spreader levels the concrete to accommodate placing of reinforcing mesh and a following single-drum 34-E paver lays the top 4 in. of concrete.

A screed finisher strikes off the concrete, followed by a mechanical longitudinal float, the usual straight-edging and a damp burlap dragged over the surface. Curing is done by covering immediately with burlap-faced cotton "quilts," which are kept wet by sprinkling from a tank truck.

Some 5 miles of 200-ft. wide runway are now being laid under contracts held by A. I. Savin of East Hartford, Conn., whose outfit is shown above. Drainage of the field, taxiway construction and a temporary administration building will be completed this summer and it is likely the airport will be ready for limited operation in the fall.

The work at Idlewild is being done by the Department of Marine and Aviation of the City of New York, which has retained Jay Downer of New York to design and supervise construction.

Congress starts an investigation of work on Inter-American Highway

Senate committee to study charges of waste of public funds by Army engineers on various war jobs

Because of claims made in the Senate of extensive mismanagement by the U. S. Army Engineers in their work on the Inter-American Highway, Congress has begun an investigation of the methods followed by the Corps of Engineers on that war project. Last week Senator Robertson of Wyoming charged that expenditure of hundreds of millions of dollars for foreign construction had been handled poorly by the War Department. Senator Ferguson of Michigan also charged that the Federal Bureau of Investigation failed to look into the methods used by the Army, although it was asked to do so.

Mead Committee begins study

As a result of these claims, along with those of other Senators, the Special Committee to Investigate the National Defense Program (formerly known as the Truman Committee and now as the Mead Committee) has begun a study of Army Engineers operations on the Inter-American Highway.

Senator Robertson believes that such a study may reveal much to be criticized. He also feels that it might be worthwhile for Congress to investigate the Alcan Highway, the Canol project and the jobs carried out by Army Engineers in Hawaii.

The major basis for Senator Robertson's criticism are the charges made by Fulton Lewis, Jr., radio commentator, in a series of recent broadcasts.

Waste charged on war work

In speaking before Congress, Senator Robertson stated: "In some week or more of broadcasting, Mr. Lewis has presented to the nation one of the most extraordinary stories, a story which calls most definitely for a re-examination of all the payments, contracts and financial matters in general of the Alcan Highway, the Canol project, the various Pearl Harbor and Hawaiian contracts, the Panama Canal contracts, that is for the construction of additional lock facilities on the canal, and particularly for the various contracts and work done on the Latin American Highway [the Inter-American highway]. This highway was designed as a military transportation link between the United States and the Panama Canal Zone when the possibility of a Japanese attack on the canal was very much to be considered and also the threat to our coastwise shipping by Japanese submarines."

High equipment rentals

As part of his criticism, Senator Robertson also had printed in the Congressional Record broadcasts by Mr. Lewis at Los Angeles for four nights early this month. In these broadcasts it was claimed, among other things, that government construction materials were used by private individuals, equipment rentals were extremely high, accurate records were not kept, inferior materials were supplied by American firms, and general inefficiency occurred in carrying out the work.

• • •

Record June rainfall in Western Arkansas

On June 9 at Ft. Smith, Ark., 4.66 in. of rain fell in 2 hr., 14 min., and from 5 p. m. to 11 a. m. on the 10th, 8.58 in. was recorded, according to the U. S. Weather Bureau. The latter figure is a new rainfall record for 24 hr. at that location. On the 11th at Ft. Smith, 1.97 in. fell, and on the 12th, 0.61 was recorded. On June 10 at Webbers Falls, Okla., a short distance upstream from Ft. Smith, 10.47 in. in 24 hr. was recorded.

Heavy rains (over 6 in. in 24 hr.) fell in the middle Red River basin, in the northeast corner of Texas. On June 17, rainfall at Atoka, Okla., totalled 7.12 in. on the Muddy Boggy Creek, a tributary of the Red River, and severe flooding occurred.

As a result of the continued heavy precipitation in the Midwest, the lower Missouri River early this week was in moderate flood from Kansas City on downstream. The Mississippi River was also in moderately severe flood from Quincy, Ill., downstream to the mouth of the Ohio. At St. Louis a stage between 35 to 35½ ft. was expected by June 20, and at Cairo it is now above flood stage, registering 43½ ft. Monday.

This has been the second wettest spring on record for Arkansas, Missouri and Iowa, and the wettest spring for Illinois since 1927, the Weather Bureau also reports.

• • •

Engineers start move to amend Wagner Act

Recommendation that its member sections, through their respective national organizations, initiate and vigorously prosecute a campaign for amendment of the Wagner Act to insure technologists "genuine freedom of association and self-organization, in matters relating to collective bargaining under the National Labor Relations Board," was adopted at a recent meeting of the San Francisco, Calif., Engineering Council.

The resolution charged that insofar as engineers, architects, chemists, industrial scientists and other technologists are concerned, "the Wagner Labor Relations Act has failed utterly to achieve its avowed purpose of 'protecting the exercise by workers of full freedom of association self-organization and designation of representatives of their own choosing, for the purpose of negotiating the terms and conditions of their employment or other mutual aid or protection' ".

Council members asserted that the act as now written and administered, tends instead to amalgamate professional workers in a "labor front," merging technologists and technicians in bargaining units, thereby imposing representation by heterogeneous labor unions committed to bargaining methods and objectives which the council believes are inconsistent with the best principles of professional conduct.

The resolution urged an authorization by Congress that will establish a clear statutory line of demarcation between professional and non-professional workers, and that a directive be issued to the NLRB which would require the board to permit technologists to waive or exercise rights of self-organization and designation of representatives in fully autonomous units, restricted to and controlled by technologists.

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Negotiation of contracts by Army to be dropped at close of war

Chief of Engineers states that negotiations of all contracts was made necessary by war conditions—not a permanent practice

Orders issued to district engineers of the U. S. Engineer Department to abandon public calls for bids and public letting of contracts for proposed work of the department (*ENR* June 7, vol. p. 793) do not indicate any change of policy, according to Lieut. Gen. Eugene Reybold, Chief of Engineers, U. S. Army. In reply to an inquiry from this Journal General Reybold states: "The present system of awarding contracts is strictly a war measure and not in accordance with normal peacetime procedure. These are abnormal times, and abnormal procedures in the interest of the war effort are required. Upon the termination of the war with Japan the Corps of Engineers will again revert to the peacetime policy of public advertising and the awarding of contracts to the lowest bidder at public bid openings."

Based on WPB order

Instructions issued to the district engineer at Los Angeles, which were reported in our issue of June 7, were the result of an amended Directive No. 1 of the War Production Board, issued May 12, 1945, General Reybold states. The part of that directive relating to war contracts reads as follows:

"Except as hereinafter provided, all such departments and agencies shall place contracts relating to war procurement by negotiation. The principle of negotiation makes possible effective coordination, proper evaluation and efficient use of manpower, materials, plant capacity and public funds. Negotiation as used in this directive may include not only face-to-face dealings but also purchasing by securing informal written bids or telephone quotations. Where consistent with the required speed of war procurement, notifications of the proposed procurement shall be given to a reasonable number of qualified contractors and quotations shall be secured from them."

With respect to this directive and the instructions issued to the division and district engineers, General Reybold states further: "To effectively carry on negotiations it is essential that bids be carefully considered by the contracting officer before negotiating with the apparent low offerer. A public bid opening would seriously hamper, if not entirely defeat whatever opportunity the contracting officer might have had to reach a fair price with the apparent low offerer. Accordingly, under the system of negotiation adopted by the War Department pursuant to directives of the War Production Board, it is essential that public bid openings as they occurred prior to Pearl Harbor be eliminated.

"There is no objection on the part of this office, and in fact, division and district engineers have been specifically instructed to furnish persons having a bona fide interest with a list of the bidders together with the amount of all offers, after the award has been made. Obviously, under the present system of negotiating of all contracts, the names and bid amounts could not be revealed until the award had been made. Likewise, there is no objection on the part of this office to permitting the examination of complete plans and specifications by persons having a bona fide interest prior to the making of an award.

"In the event that some of my division or district engineers have been conducting what you term a public opening, it is possible that they have misinterpreted what is considered by the War Department to be the system of negotiating all contracts. The policy of the War Department has not changed in this respect."

In this connection, however, it should be pointed out that the work for which the district engineer at Los Angeles had revived the practice of calling for public bids and public letting of contracts (ENR, June 7, vol. p. 793) was normal U.S.E.D. work such as excavating flood channels, which, it has been claimed, would not fall into the WPB classification of "contracts relating to war procurement".

Other district offices have been calling for bids on similar work and even on work that might be classed as war work for which plans and specifications had been prepared in advance of the call. Still other district offices have been negotiating all contracts, regardless of the character of the work.

Under the instruction recently issued to the division and district engineers by the Chief of Engineers, contracts for all work now are to be negotiated. Only those contractors from whom bids are solicitated will receive advance notice that the work is planned.

Old hydrant displayed in Washington, D. C.

In the Wisconsin Ave. pumping station of the District of Columbia water department an old combination fire plug and public water supply hydrant is now on display. Purchased in 1858, the hydrant is considered of interest to visitors to the station because of the contrast to plugs manufactured today.

The cast-iron unit, which was manufactured by W. M. Ellis & Brother, Washington, D. C., was known as the "Meiggs Combined Fire & Public Hydrant." At the top is the public faucet and about 2 ft. lower down is a 2½-in. dia. hose connection.

Shown beside the plug is William F. Reagan, Sr., employee of the water department since 1896. Mr. Reagan, still on active duty, helped install many units of this design.

• • •

MVA Bill hearings begin in Senate Sept. 17

The Committee on Irrigation and Reclamation of the Senate has unanimously resolved that hearings on the Missouri Valley Authority Bill (S. 555) will begin Sept. 17. The Commerce Committee of the Senate early in May recommended defeat of the proposal (*ENR* May 10, Vol. p. 677). The Senate Committee on Agriculture plans to hold hearings on the bill after the irrigation and reclamation hearings are completed. Since each of these groups is allowed 60 days for hearings, early consideration of the bill by the Senate as a whole is not expected for several months.

Spanning the Colorado River at Topock, Ariz., is this new double-track Santa Fe Railway bridge.

New Santa Fe Bridge at Topock, Arizona

Once more the treacherous Colorado River has been spanned with a new railroad bridge built high above the water level and supported on reinforced concrete piers founded in solid rock deep beneath the silty river bed. This time it is the Atchison, Topeka and Santa Fe Railway's new double-track bridge near Topock, Ariz., which was placed in service on March 7.

Designed for Cooper's E-72 loading, the new bridge is 1,507 ft. long. Starting at the west end, there are three 100-ft. deck plate girder spans, three 350-ft. deck truss spans, one 100-ft. deck plate girder span and a 50-ft. rolled beam span. Trusses are 46 ft. deep, spaced 28 ft. center to center and rest directly on reinforced concrete piers. The approach spans include four lines of 9-ft. deep girders and eight 36-in. rolled beams, supported on steel bents and concrete piers.

The bridge has a ballasted deck, laid on a solid timber floor, which weighs 2,400 lb. per lin. ft. of single track for the girder spans and 2,100 lb. per lin. ft. for the truss spans. Construction of the bridge required 6,500 tons of bridge steel; 17,900 cu. yd. of concrete; 14,100 cu. yd. of excavation and 106,800 field-driven rivets.

Substructure on solid rock

Both abutments and the seven piers are supported on reinforced concrete cylinders, spaced from 24 to 38 ft. apart, and carried down through silt and unstable material to solid rock. Cylinders in the east abutment and in the adjacent pier were sunk by open excavation to final position. All other cylinders including those for the other abutment were sunk by a combination of open excavation and pneumatic caissons. Cylinders were capped with a heavy reinforced concrete shaft to complete the piers and abutments.

All cylinders have reinforced concrete walls outside of an 8-ft. dia. center well, which was belled out at the bottom to provide a working chamber and equipped with a steel cutting edge on the bottom rim. Each cylinder was sunk to and embedded a minimum of 2 ft. into solid rock, after which the working chamber and center well were filled with concrete.

Pier number 3, located 500 ft. from the Arizona bank in the deepest part of the river, is believed to be one of the deepest pneumatic piers ever constructed in this country. It is founded 123 ft. below water level. In order to work men at such a depth, special permission had to be obtained from the Arizona Industrial Accident Commission allowing the use of 52-psi. air pressure, which was two pounds above the legal limit. Sand hogs working inside the pneumatic caissons under this excessive pressure were limited to 30-min. shifts. The men descended through an air lock in which the pressure was built up to 52 psi.

Construction of the substructure was expedited by building a timber trestle tramway across the river immediately adjacent to the bridge. It carried a narrow-gage track on which concrete was transported to the various piers. Whirley cranes operating on rails straddling the narrow-gage track, excavated for the piers, drove and removed the steel sheetpiling and placed concrete in the caisson cylinders sunk by pneumatic methods.

Substructure of the new bridge, in the foreground, was constructed from a timber trestle tramway built across the river. The fifty-five year old truss shown originally had a 330 ft. simple span suspended from cantilever trusses. The bridge was strengthened by addition of the pier at the center.

Erection of the superstructure was started on the California side and progressed eastward to the Arizona bank of the river. The two east trusses were erected by cantilevering over a steel falsework bent located near the center of span, using a tieback member between spans. All structural members were moved out onto the structure as erection progressed and lowered into position by a huge stiff-leg traveler derrick operating on top of the trusses.

The new bridge is located a few hundred feet from, and will replace, the Santa Fe's old Red Rock bridge that was built in 1890. Constructed originally as a single-track 990-ft. cantilever through truss including a 330-ft. suspended simple truss span and a 120-ft. deck girder approach span, the Red Rock bridge required strengthening in 1901 to carry the heavier locomotives then in use.

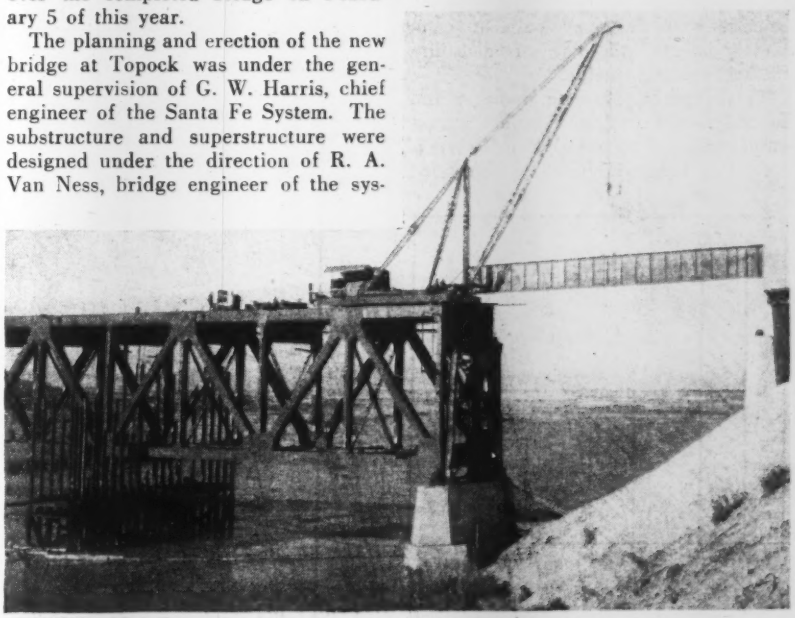
Nine years later a concrete pier was built under the center of the 330-ft. suspended span to lessen the load on the cantilever. Since 1931 more frequent repairs and strengthening have been necessary to keep pace with the ever increasing locomotive loads it carried. For a number of years it was necessary to restrict speed on the bridge to 10 m.p.h., and no double-heading was permitted across it by some of the Santa Fe's larger locomotives.

Red Rock bridge will be remembered by oldtimers as having created engineering history during its erection. At that time it was claimed to be the largest cantilever bridge in this country and erection of the truss span was completed in 80 working days with an average crew of 75 men.

Construction of the substructure for the new bridge was begun in November 1942, by the Kansas City Bridge Company, and completed by July 1944. The American Bridge Company, contractor for the superstructure, began erection in May, 1944, and the first train crossed over the completed bridge on February 5 of this year.

The planning and erection of the new bridge at Topock was under the general supervision of G. W. Harris, chief engineer of the Santa Fe System. The substructure and superstructure were designed under the direction of R. A. Van Ness, bridge engineer of the system. All construction was under the immediate supervision of M. C. Blanchard, chief engineer, Santa Fe Coast Lines, with Walter E. Robey, bridge construction engineer in direct charge.

Louis J. Grieble was construction superintendent for the Kansas City Bridge Co. and Edward Nimmergood was superintendent of erection for the American Bridge Co.



Trusses were erected by cantilevering over a temporary steel bent placed near midspan. Girders and truss members were lowered into position by a traveler crane operating on top of previously erected trusses.

Lack of engineers anticipated after war

(*Continued from p. 1*)

"This, however, is only a part of the challenge facing our technological personnel. Much of the world is going to depend on America for help in becoming a going concern again. In many cases this means the reestablishment or the creation of whole new technologies. America is apparently going to follow a policy of fostering the technological well-being of our world neighbors as a means of securing markets and gaining allies. The future of America and of much of the world is, therefore, largely dependent upon the leadership of our professionally trained men and women. But unfortunately we have been unwilling to recognize this nationally.

Years of training needed

"Technical skills and specialized knowledge require years of training. The leaders of five years and ten years from now should be in training at present. Instead we have all but ceased our training in all the fields upon which our technological civilization most directly depends. The stoppage of the flow of young men into scientific and technical fields is a serious threat to the health, safety and welfare of the nation for the next two decades. None of our allies has made this mistake."

"The virtual abolition of deferment, the sharp curtailment of college military programs, and the refusal of the military authorities to assign men for scientific training have almost completely stopped the flow of men into the technological fields."

In the period between the first and second world war, the report states, employment of technically trained personnel in industrial research increased about 8 percent per year, as indicated by Fig. 2. "Presumably, after the war this rate of increase would recur if personnel were available. . . . If this were the case, then by 1955 there would have occurred . . . an increase in personnel of 200 percent over the 1940 level."

Higher federal requirements

The report anticipates that use of highly trained technical personnel by the federal government will increase after the war both to revive research delayed by the war and for military purposes. The latter is expected to be greatly increased over prewar requirements.

Large demands for technological personnel from foreign nations also are predicted in the report. "Perhaps the actual reconstruction of foreign installations smashed by the war will create the first impact. . . . Actual rebuilding will also, no doubt, be contracted for with American firms with the use in foreign lands of American personnel for longer or shorter periods. Finally, American personnel will undoubtedly be sought after for direct hire to assist the rebuilding or expansion of technological establishments."

The decline in scientific training at postgraduate level is shown in Fig. 3. These men, says the report, are the

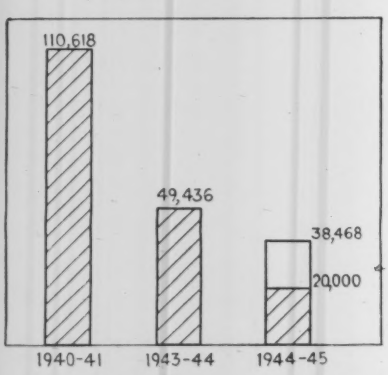


Fig. 1. Graduates from U. S. schools of engineering just before the war and during the war period. The top section of the 1944-45 bar indicates freshmen awaiting military service.

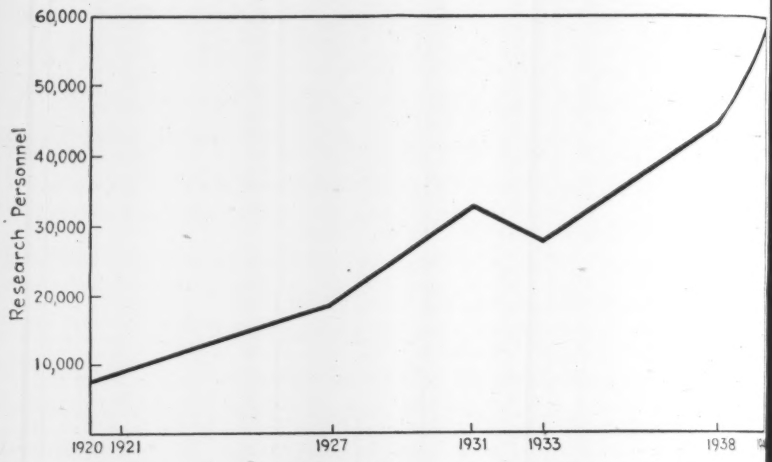


Fig. 2. Persons employed in industrial research from 1920 to 1940. The rate of increase was about 8 percent a year except during the depression period.

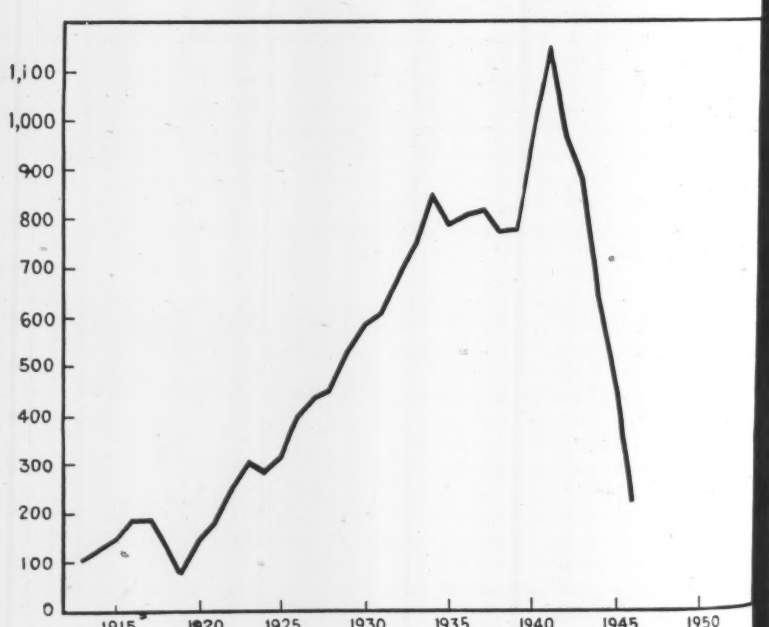


Fig. 3. Number of doctoral degrees granted since 1913 in physics, mathematics, geology, chemistry and engineering.

ture leaders of American science. "It amazing indeed that in the very riod when the worth of such person- is so brilliantly demonstrated, the ord shows we have canceled our oduction of reserves.

"It seems realistic to look for no rge scale resumption of training in technological branches in American hools before 1947. It will thus be 50 before industry can expect to be- large scale recruiting again, and en only at baccalaureate level. Full ale training at the doctorate level ust occur much later.

"It must be emphasized that the oppage of training is much more seri- s than these charts indicate. Figures not give a measure of . . . dislocation d dispersal of faculty personnel. . . ."

Training in other countries

Russia, Great Britain, Canada and ustralia are cited as having displayed more intelligent attitude toward train- in the technological branches than s been displayed here. Training in gineering in Russia, it is stated, has en vastly stimulated during the war, d England has maintained a steady w of students in critical technologi- l categories equal at least to the ewar norm.

If changes in present policies cannot obtained, the report urges support legislation now in Congress provid- for deferment of definite quotas of edical and scientific students.

Army and Navy training

No estimate of the number of men ing given some engineer training in Army and Navy is included in the ort of the American Council on Edu- tion and the National Research Coun- l. Inquiries addressed to military au- orities by *Engineering News-Record* ought forth the reply that 2,571 grad- tes from the Army Specialist Train- Program had been assigned to the rps of Engineers up to June 9 of s year. Most of the men in the S.T.P. groups had had some college ining before they were drafted.

About 3,000 men are now receiving gineering training as part of the S.T.P. program. Only a limited num- r of these men, mainly electrical engi- ers, now completing the sixth term ll start the seventh term in July. out 400 new men will begin the engi- ering training in July.

Up to April 30, 6,212 engineer stu- nts had completed the Navy V-12 ogram. At that time there were 13,- 9 engineer students enrolled in the 12 training. About 2,000 more men ll begin V-12 training on July 1, but number of these that will take gineering is not known.

Mississippi again above flood stage at St. Louis

For the fifth time this year the Mississippi River has been above flood stage in the vicinity of St. Louis. Heavy rains last week on the watersheds of the Missouri and the upper Mississippi brought a considerable rise in the already swollen streams. The St. Louis gage stood at 30.4 ft. last Monday and is expected to reach 35 to 35½ ft. before cresting about June 22. Flood stage at St. Louis is 30 ft.

Although the present flood is not expected to reach the extent of those of the past two years, a maximum gage at St. Louis of 38.9 in 1943 and 39.1 last year, it has necessitated a strong fight by the U. S. Army Engineers to prevent excessive damage, particularly in some low-lying districts in St. Louis.

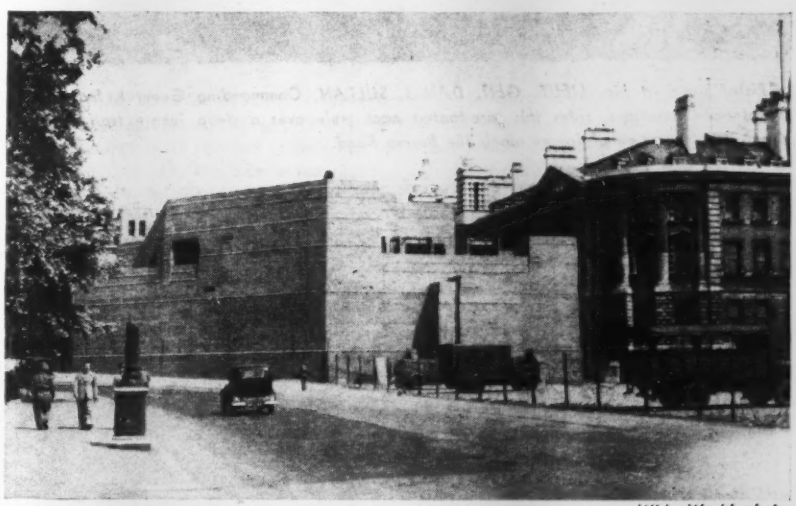
The Meramec River, just below St. Louis, last week registered highest since 1915 and Piney Creek, a tributary of the Gasconade River, had a flash flood causing considerable damage and loss of life in Piney, Mo.

The chief reason for the recurring high water near St. Louis has been the sustained rainfall this spring—a total since Jan. 1 of 27.45 in.

Use of residual oil for paving prohibited

Scarcity of residual oil, inventories of which are at the lowest level since the war began, has made it necessary to prohibit its further use anywhere in the United States as a paving material, Deputy Petroleum Administrator Ralph K. Davies announced June 18. Action was taken by formally amending Petroleum Administration for War Directive 72, which formerly banned the use of road oil only in the West Coast states—Oregon, Washington, California, Nevada and Arizona. The amendment extends the restriction to all other states and the District of Columbia.

The amendment provides: West Coast restrictions continue as at present, and elsewhere in the United States allowance is made for commitments entered into prior to the issuance of the directive. Delivery or acceptance of delivery of oil for use as a paving material or dust palliative will be permitted in the District of Columbia and all but the West Coast states for 10 days after the date of issuance of the directive, June 12, 1945; use of oil for such purposes will be permitted in the same area for 20 days after the issuance date.



Wide World photo

First picture of London's strangest building

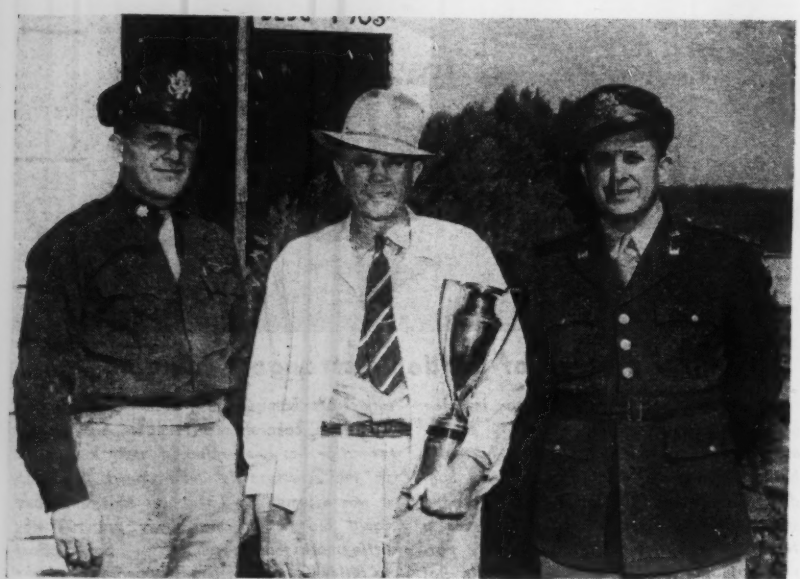
Back in the days when a German invasion of Britain seemed a daily possibility, an unusual and mysterious building was hurriedly built adjoining the Admiralty office in London. Viewed from St. James Park across the street it resembled nothing so much as a North African desert fort, as usually portrayed in the movies—windowless walls, flat roofs at several levels and guns mounted here and there.

The first pictures of this building have just been released. It is, in fact, a fort, designed to house vital war staffs and records safe from bombs and invasion shelling behind thick concrete walls and roofs. No information has been released as to how much of the structure is underground, although it was assumed by Londoners that what one could see (as in the above picture) was little more than a penthouse. Some effort to relieve the monotonous appearance of the solid walls was made by dividing the surface into units by horizontal bands and by using vari-colored aggregate exposed on the sand brown surface by wire brushing. Despite this, few Londoners admire the building.

MEN AT WORK

Pistol slung at hip, LIEUT. GEN. DAN I. SULTAN, Commanding General, India-Burma Theater-of-Operations, rides this sure-footed pack mule over a steep jungle trail during a front line inspection of forces along the Burma Road.

MAJ. HENRY H. CROCKETT, commanding officer of the 1st Battalion, 17th Marine Engineering Regiment. He is now stationed at Marine Headquarters, Washington, D. C. Major Crockett is a graduate of the University of Tennessee.



Aloe Army Air Field, Victoria, Tex., was awarded a gold cup at a recent meeting of the Texas Waterworks and Sewerage Association for having the best sewerage plant in Texas. DELBERT WOODERSON, plant superintendent, is shown holding the cup. At left is LIEUT. COL. DONALD R. CONARD, deputy commander of Aloe Field, and at the right is Post Engineer CAPT. JOHN HUTH, plant supervisor.

LIEUT. COL. C. H. SHUEY, commanding officer of the 5th Marine Engineering Battalion, 5th Marine Division. Colonel Shuey was graduated from Annapolis in 1931 as a 2nd lieutenant in the Marine Corps.

On construction of a highway bridge at West Point, Va., of 40-ft. precast deck sections, H. E. HUGHSON (left) is office manager for the Diamond Construction Co., the general contractor, and GUY B. WILSON, highway engineer for the Virginia Department of Highways.

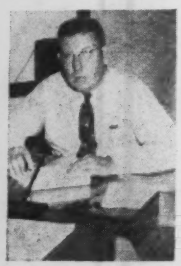
Two district engineers for the Virginia Department of Highways, J. H. WYSE (left) is stationed at Salem, while P. W. SNEAD (right) is engineer of the Petersburg district.

MAJ. MAX L. LOEWENBERG, in peacetime an architectural engineer in Chicago and now operations and planning officer of the 347th Engineer General Service Regiment, was on an inspection trip of 32 railroad bridges that the regiment had built in a 20-mile section north of Luxembourg when this picture was taken in late February. Even at that time he had his designs well along for the Rhine River bridge that was built some six weeks later at Mainz in 9 days and 22 hr. For work on this structure, both Major Loewenberg and his commanding officer, Col. Harry Hulen, were awarded the bronze star, which was pinned on by Maj. Gen. C. R. Moore, chief engineer E.T.O., at a ceremony at the bridge.

Construction men and engineers alike fought snow and ice last winter at the Soo to concrete the face of an old rock wall along the approach canal to the MacArthur Lock. From left to right: EDWARD E. WHITE, manager; ALBERT DI GIACINTO, superintendent and GEORGE FLAY, engineer, of the Sunswick Corp., New York, contractors. Engineers (right) include: BERT G. McCARTHY, project engineer; E. E. HARNS, engineer in charge; C. A. AUNE, assistant engineer in charge; and A. A. JOSEPH, assistant project engineer.

MEN AND JOBS

Key Woods, in government service for more than 25 years and for 16 years in charge of channel maintenance work in the Vicksburg, Miss., Engineer district, has been given the Award for Meritorious Civilian Service. It was presented on June 7 in the name of Lt. General Brehon G. Somervell, Commanding General of the Army Service Forces, by Lt. Colonel R. W. Sauer, District Engineer, Vicksburg Engineer District.



The citation reads, "In recognition of exemplary performance of duty in the Vicksburg District of the Corps of Engineers. By virtue of his foresight and planning in maintaining proper channel alignment and river project depth, and his broad knowledge of river and navigation problems, ocean-going craft in large numbers have passed safely down the Mississippi River to the Gulf of Mexico without mishaps or delay caused by river channel conditions, thus he has made a notable contribution to the war effort."

Charles W. Yoder, formerly engaged in the design of bridges and buildings with the Pennsylvania Railroad, is now affiliated with the Portland Cement Association as structural engineer in the Milwaukee, Wis., district office.

Charles Rauner has been named superintendent of the Fort Wayne district of the Indiana State Highway Commission, succeeding Levi Keiser, Columbia City. The district includes Allen, Whitley, Huntington, and Noble counties.

E. M. Wicker, Chatham resident engineer of the Virginia State Department of Highways, has been elected city engineer and director of public works of Danville. He succeeds W. F. Croom, Jr., resigned.

Promotion of **Maj. Horace E. Belsher** of Houston, Tex., to lieutenant colonel has been announced by the Chinese Combat Command. Colonel Belsher is an assistant engineer officer in south central China. He was formerly an estimator and inspector for the Federal Housing Administration in Houston. Simultaneously it was announced that **Lieut. Richard Ducker** of Tecumseh, Okla., has been promoted to captain. A graduate of the University of Oklahoma, he was employed by the Dresser Engineering Co., at Tulsa as a construction engineer.

Maj. J. Donald Kroeker, Portland, Ore., officer-in-charge, engineers' department, projects and operations section, has been promoted to lieutenant colonel, it was announced at Alaskan Department headquarters. Col. Kroeker was called to active duty on Jan. 6, 1943. For six years previously he had managed his own firm of consultant engineers in Portland.

Frank Hubner is superintendent of the Bluffton district of the Indiana State Highway Department.

Promotion of **Leon Gottleib,** Birmingham, Ala., to lieutenant colonel was announced at headquarters of the first Engineering Aviation Brigade in Belgium. A highway engineer in the Alabama State Highway Department before being called into active duty in 1942, Gottleib went overseas in 1943, and as executive officer of the brigade has been supervising airdrome construction on the continent since landing with the first aviation engineer unit on Omaha Beach on D-plus-1. He was recently awarded the Bronze Star Medal.

C. O. Gilliam, civil engineer, formerly of Pheonix, Ariz. is now associated with Ventura Engineering Co., general contractors, Los Angeles, Calif. He still maintains an office at Pheonix.

John Boardman is city engineer at Tulare, Calif., after having been acting city engineer for Compton, Calif. Previously, he was associated with Los Angeles engineering firms.

Raymond A. Etzel has been named assistant to Arnold V. Finch, engineer of the Ohio Highway Department, division No. 2, at Toledo, succeeding **William Hill,** acting assistant, and will have charge of maintenance in the eight-county Toledo division. Mr. Hill will be retained as an engineer. Mr. Etzel was an engineer with J. H. Berkebile and Son, contractors, and for five years was WPA director of operations in Toledo, and for the last two years has been in charge of all FWA construction in Michigan.

George J. Rohan, for the last twelve years superintendent of the Waco city waterworks, Waco, Tex., has resigned and now heads The Rohan Co. of Waco, distributors of waterworks and municipal supplies.

G. R. Logue has been named district highway engineer at Louisville, Ky., replacing **J. A. Reed,** assigned as assistant engineer in the Bowling Green district. Mr. Logue was formerly chief engineer and assistant in charge of administration in the Ohio State Highway Department.

Capt. Arvid K. Reed, chief of the fiscal division of the Seattle District, Army Engineers, has been promoted to major. He studied engineering at the University of Washington and was associated with his father in A. Reed & Son, Seattle and Alaska contractors.

Gordon A. Mowat, partner in the A. F. Mowat Construction Co. of Seattle, Wash., has been commissioned an ensign in the Civil Engineering Corps of the Naval Reserve for duty with the Seabees. He has reported to the Naval Construction Training Center at Davisville, R. I., whence he will go overseas. He majored in civil engineering at the University of Washington.

Charles M. Chuckrow has become associated with the Tishman Realty & Construction Co., Inc., New York City. For more than 20 years he was connected with Fred T. Ley & Co. He was executive vice president in charge of the New York district of that organization which built the Chrysler Building and other important structures in New York elsewhere. Later he joined the Fred F. French companies of which he was president when Knickerbocker Village in downtown Manhattan was built by them.

During the last two years, Mr. Chuckrow has been a member of the Renegotiation Board of the U. S. Corps of Engineers, North Atlantic Division. A past president of the Cornell Society of Engineers, he was formerly a member of the engineering college council of that university. He also served as a member of the committee of the Commerce and Industry Association which drafted the Urban Re-Development Corporations Law.

News of the Engineering Schools

Arthur T. Ippen, assistant professor of civil engineering in charge of the hydraulic laboratory at Lehigh University, has been appointed associate professor of hydraulics in the department of civil and sanitary engineering at the Massachusetts Institute of Technology. His appointment is part of a plan to expand the program in hydraulics in the department of civil and sanitary engineering at M.I.T. where he will be in charge of work in fluid mechanics. The development of a new hydraulic laboratory is anticipated among the important postwar plans of the institute.

Born in London, England, in 1907, Mr. Ippen was graduated from the Technical University of Aachen, Germany, in 1931, following which he was an exchange fellow at the Institute of Hydraulic Research at the University of Iowa. From 1934 to 1937 he was a teaching and research fellow in hydraulics at the California Institute of Technology, continuing subsequently as instructor and research engineer until 1938, at which time he joined the staff of the civil engineering department of Lehigh University.

F. B. Farquharson, professor of civil engineer at the University of Washington, Seattle, who for more than a year has been conducting extensive experiments on models of the ill-fated Tacoma Narrows Bridge, recently was named director of the engineering experiment station at the university.

About 130 engineers from all parts of eastern Canada spent a week recently at the University of Toronto taking a special course arranged to give to men in practice an introduction to soil mechanics and modern aspects of foundation engineering. Four lecture sessions were held for each of five days, and many of those attending the course also participated in evening laboratory classes. The course was arranged and the lectures given by Robert F. Legget, associate professor of civil engineering.

Henry Lee Norris will retire June 30 as director of buildings and grounds of Columbia University, New York City, after 43 years of service, a period which coincides with the presidency of Nicholas Murray Butler and which has witnessed the major physical development of the university.

Mr. Norris who becomes director emeritus on July 1, joined the Columbia staff soon after he was graduated from Stevens Institute of Technology in 1902.

Prof. Everett E. King of the department of civil engineering, University of Illinois, was especially honored at the 73rd annual commencement on June 3. He is eligible for retirement as of September 1 next, following 27 years of service to the department and to the university. Much of that time has been spent in teaching and research in railway civil engineering.

Purdue University, Lafayette, Ind., has established a division of technical extension, to coordinate all extension activities, other than agriculture, under the direction of Prof. C. W. Beese. An expanded program of organized classes, short courses, demonstrations, lectures, conferences and other formal and informal enterprises conducted both on and off the campus is expected to provide to industrial centers of the state services comparable to those now being rendered by the Agricultural Extension Service to farmers. The Engineering Extension Department, established by the board of trustees in June, 1921, will be among the major programs to come under the new division. Technical extension centers already established include Indianapolis, Fort Wayne, Muncie, and the Calumet region.

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New civic center is proposed for Memphis

An elaborate plan for a postwar civic center in Memphis, Tenn., embracing city and county buildings set amid park-like surroundings, was revealed by the city commission recently as a part of a proposal to free Memphis from the ring of slums that is gradually tightening around its Main Street business district.

The civic center would begin with the present Criminal Courts Building, on Washington Street and the present Shelby County Courthouse, on Adams Street, and extend southward, between Second and Third Streets, to Madison Avenue. The strip between Adams and North Court would be converted into a park, and in the block between North Court and South Court east of Court Square a new tower-like city hall would be erected.

In describing the larger civic improvement plan, Lawrence P. Cockrill, secretary of the Memphis Planning Commission, declared that slum belts blight the business area in a wide arc extending from Fort Pickering in South Memphis to Wolf River in North Memphis. Rehabilitation for the elimination of these areas is a part of the new proposal.

Named as a committee to explore the possibilities of the suggested development were 30 prominent Memphians. Edward F. Barry, head of the Memphis Housing Authority, was elected chairman and Joseph A. Fowler, executive secretary of the Memphis Housing Authority, was elected secretary.

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Texas plans 7,205 miles of farm-to-market roads

Recently, the Texas State Highway Commission announced that it had approved the construction of 7,205 miles of farm-to-market roads at a cost of $60,000,000, to be built in the first three postwar years provided funds are available, half of the cost to be borne by the state and half by the federal government. The roads included number 841 and are secondary or feeder roads.

The greater part of this project will be in farm and ranching counties rather than in metropolitan counties, where the highway system is further advanced. The state will pay for its share of the project from current revenues. Counties will not be asked to participate in the financing.

The mileage included in the program carries heavy farm traffic. It was selected after a detailed canvass of the state by the Texas Highway Commission's engineering staff.

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H. K. Ferguson Co. bought by son of founder

A. Kingsley Ferguson, son of the late H. K. Ferguson, recently purchased the H. K. Ferguson Co., Cleveland, Ohio, construction and engineering firm founded by the father 28 years ago.

The firm, dealing exclusively with large war contracts, was bought from the estate for around $750,000. Associated with the 32-year-old construction man are Stirton and John Oman III of Nashville, Tenn., heads of the Oman Construction Co.

The Oman firm and the H. K. Ferguson Co. were associates in the construction of the $40,000,000 Wolf-Creek ordnance plant in Milan, Tenn., and Mr. Ferguson was their project manager on the job.

The Ferguson Co. is doing war plant construction in South America and Canada as well as this country.

Construction Communiques

ENGINEERING NEWS FROM THE BATTLEFRONTS

Okinawa—How a veteran Marine engineering outfit bulit a 100-ft. steel bridge in 12 hours over Asa Estuary three miles north of Naha, is told by Staff Sergt. Herman Kogan, of Chicago, Ill., a Marine Corp combat correspondent.

This feat, accomplished after three previous bridges had been blown up, enabled tanks and trucks carrying supplies, reinforcements, and ammunition to be rushed in, for the first time in three days, to the battling troops of the Sixth Division's 22nd Regiment.

"On the first day of battle for the ridge," says Kogan "the bridge was blasted by enemy mortars. A hastily-strung foot bridge also was blown up. A few hours before dawn the next day, another bridge was strung across. It was destroyed by Jap demolition squads just after three infantry companies had hustled to the other side.

"Thenceforth, urgently-needed supplies could be brought over only in driblets by amtracs. Men wounded on the ridge had to wait hours before the tractors, harrassed by rifle, mortar and machine gun fire, could evacuate them.

"A new bridge was needed. To build it, a call went out for the men of A Company, Sixth Marine Division Engineering Battalion, who fought on Bougainville and Guam.

"At dusk, first supplies were hauled partly by truck, partly by hand from the mainland to the wrecked section. Almost instantly the Japs started their artillery shells flying.

"'We ducked and ducked fast,' said Staff Sergt. Lindsey House, of Nokomis, Ill. 'Then the sweet sound of our artillery answering made us a bit happier. Our planes came over and hit the Jap positions, too. Then it got quiet, so we lifted ourselves out of the water and went back to work.'

"By 10 o'clock that night, much of the building material—'rocking rollers' panels, spans, stringers on which spans were to be stretched, decking, ribbands, bracing devices—was ready. Capt. John McCuiston, of Hamburg, N. Y., company commander, put his first platoon to work, his two others to guard against snipers and infiltrating Japs.

"As soon as the first spans had been carried forward the Japs resumed shelling. Three men, hurt slightly by flying rock, insisted on working.

"'It's a miracle more of us weren't hurt,' related First Lieut. Harry A. Herz, of Brooklyn, N. Y., former personnel chief for the United States Housing Authority in Washington. Those riflemen out front must have gotten the Jap's forward observer and so they couldn't get a better aim. And it was just as well.'

"At midnight, several of the spans were up. There was another barrage but the shells landed in the sea about 200 yards away. At 2 a.m. and 4 a.m. there were more shells. The final barrage came at dawn, when the bridge was nearly finished. Not a single shell had landed on the bridge.

"Four hours later, the men of Company A stood by and watched the first tanks rumble across the sturdy bridge. When they saw the tanks open fire on the tombs and caves from which Japs had hurled death at platoon after platoon of Marines, they clambered aboard trucks. Grimy, sleepy-eyed, they were on their way to the rear for rest.

"As they passed the last of the tanks a little red-headed Marine leaned over and yelled, 'We'll do it again any time you need us. Give 'em hell, tanks, give 'em hell!'"

Air Forces Photo

Triple surfacing used on advanced airfields

Triple surfacing, consisting of bituminous-impregnated cloth, wire mesh and pierced steel plank, was employed at the ends of runways and for the taxiways of some of the final airfields built by the Aviation Engineers in the European war theater. These special measures were followed to minimize destruction of the surface at the points where greatest traffic occurred.

As a first operation the entire field was surfaced with 40-in. wide strips of prefabricated bituminous (Hessian) surfacing laid with a 50 percent overlap (see ENR Nov. 9, 1944, vol. p. 593 for detailed description of the use of this material).

A light steel reinforcing mesh was next added. This material reduces damage to the Hessian by traffic and provides greater traction. The mesh is seen over the Hessian at the left in the top illustration.

Finally, when time permitted, pierced steel plank of the type used so extensively in the war theaters was put down. The result is a surfacing of greatly increased wearing qualities, that also permits the accommodation of greater wheel loads.

Use of a sled—made of a panel of steel plank—for distributing the rolls of prefabricated bituminous surfacing is shown in the bottom picture. The front end of the panel has been bent up to prevent damage to the materials already in place.

FROM AN EDITOR'S NOTEBOOK

An equitable salary scale for engineers enables Montreal's Department of Public Works to get the technical help required to plan needed improvements. Subway proposed for city

Montreal, Que.—Civilian construction in Canada is hampered generally by lack of men and materials but the Department of Public Works of the city of Montreal, aided by a liberal salary policy, has been able to obtain engineering services needed to bring a large volume of plans for needed public improvements to the contract stage. Under a salary scale for municipal employees established about a year ago, only 1.5 percent of the engineers are in the bracket below $3,000 per year. This enables the city to compete with private offers for adequate and competent engineering help for preparation of plans and for supervision of construction.

With adequate personnel obtainable, the city of Montreal, under Henri Gibeau, director of public works, plans improvements in its physical plant that will require expenditure of $60,000,000 over the next few years. A large volume of work is now in the planning stage with much of it ready for construction and some under contract.

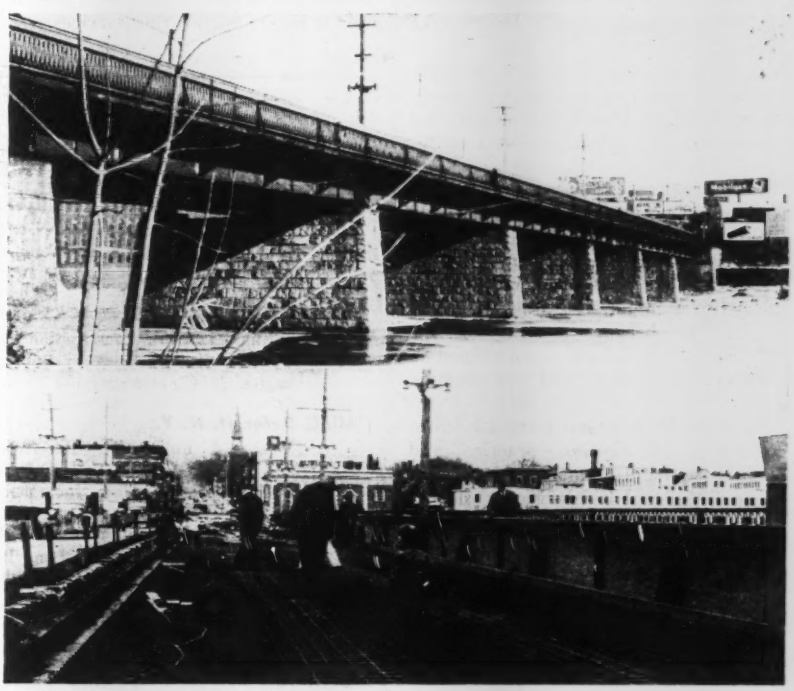
Improvements in the water system of Montreal and adjacent participating communities will cost $12,000,000. Work is now under way on increasing the capaity of the filter plant by 1/3 to a total of 200 mgd. by installation of a battery of 16 rapid sand filters at a cost of $1,500,000. Bids are to be asked shortly on a large quantity of 84-in. dia. concrete pipe to be used for four parallel intake lines from the far side of the St. Lawrence River above Lachine Rapids. An intake from the far side is desirable to avoid use of less satisfactory water from the Ottawa River. The latter flows into the St. Lawrence some distance upstream but the waters do not mix above the rapids. New reservoirs and replacement as well as extension of large water mains are part of the long time plan for Montreal.

Some $25,000,000 is needed for additional sewerage facilities in Montreal, including trunk sewers; at present plans are ready for contract on about $4,000,000 worth of work. New roads and street extensions are included in the general program of improvements with plans completed for a $600,000 overpass. A city hall annex is part of Montreal's immediate postwar plans and drawings are now under way for a structure expected to cost $2,500,000.

Other improvements include modernization of the street lighting system, now using arc-lights, and for which one-third of the plans are ready. Electrical and communication lines are being put underground throughout the city. It is expected that some $6,500,000 will be spent for city parks and playgrounds while additional money will be made available eventually for new health centers and clinics.

In Montreal, but not under the Department of Public Works, some preliminary investigation of the practicability of a subway system has been made. Since it does not appear possible to finance such a development without federal or provincial government grants, no definite plans are ready.

An initial 7½ mile route is estimated to cost about $60,000,000 and would require at least four years to build. A subway would have some special advantages in Montreal where snow during a winter sometimes totals as much as 125 in., and surface transportation is seriously handicapped by steep slopes and the lack of adequate roads leading to the residential area on the far side of Mount Royal.—H. H.



Lighter and stronger floor rejuvenates old Maine bridge

Replacing a granite block on sand cushion deck, supported on buckle plates, with a modern, lightweight I-beam grid, the State Highway Commission of Maine salvaged a 49-year old bridge. The structure has seven 85-ft. spans and crosses the Androscoggin River between Lewiston and Auburn.

The 5/16-in. buckle plates of the old floor were riveted to the top flange of stringers spaced about 4 ft. 6 in. apart across a width of 39 ft. The plates were buckled downward with no provision for drainage. Water dripping through the rivet holes corroded the stringers and, coupled with unequal settlement of the paving blocks, made the riding surface uneven, reducing the capacity of the bridge.

The new work includes longitudinal stringers at about 6-ft. centers and a 4¼-in. deep I-beam grid with main members transverse to the bridge centerline. The grid is filled flush with concrete and then surfaced with 1½ in. of asphaltic concrete. Capacity of the repaired structure is equivalent to an H20 loading.

Traffic is being maintained over half the bridge while the other section is surfaced. Work is being done by the bridge department of the highway commission. S. E. Boss is superintendent on construction under supervision of Roy A. Wentzel, bridge maintenance engineer. Max L. Wilder is bridge engineer and Lucius D. Barrows is chief engineer of the highway commission.

Chas. W. Williams heads New York Borough Works

Charles W. Williams, who since Jan. 1, 1938, has been assistant commissioner of Borough Works at Manhattan, New York City, has been appointed commissioner by Borough President Edgar J. Nathan, Jr., to succeed Walter D. Binger who resigned recently to enter private construction work. (ENR, May 17, vol. p. 688.)

Commissioner Williams is 52 years old and is a civil engineering graduate of the Massachusetts Institute of Technology. Before the first World War he was with the New York State Public Service Commission on subway construction and with Thompson and Binger, Inc., as a field engineer on industrial building work.

From 1917 to 1919 he was in the Navy and saw duty in submarine service. After the war he returned to Thompson and Binger. In 1923 he went with the Frederick Snare Corp. as assistant to the vice president, and in 1927 he became secretary of the Suburban Engineering Co., engaged in general engineering and construction work.

In 1936 Mr. Williams started his own consulting engineering practice and carried it on until Jan., 1938, when he became Assistant Commissioner of Borough Works in Manhattan.

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New super-highway plan favored for Houston

The Texas State Highway Commission has approved a plan for a superhighway system for Houston and Harris County. To carry out the plan will cost $10,000,000, to be spent by the state for construction and $3,000,000 to be spent by the city to buy rights of way.

The plan was submitted to the state highway commission by Houston City Manager John N. Edy, County Judge Glenn Perry, Public Works Director John Turney, Mayor Otis Massey, City Planning Engineer Ben Johnson, and other officials. It is an alternative to the report for a superhighway system for Houston and Harris County submitted to Houston officials and the Texas State Highway Commission last December by the J. E. Greiner Co. of Baltimore, Md., consulting engineers. The Greiner plan would have cost $60,000,000 but it would have given more elaborate improvements by using large underpasses and overpasses.

The $13,000,000 plan adopted by Houston and, on May 1, approved by the Highway Commission, includes the following main arterial routes through Houston; State Highway 225; the eastern part of U. S. Highway 90 through Houston; U. S. Highway 75, north and south; and U. S. Highway 59, north and south, to U. S. Highway 75.

The Highway Commission will decide at a public hearing which part of the plan will be begun first. Houston officials expect the plan to solve Houston's critical traffic problem. On April 20, the city council appropriated $6,410 to obtain aerial maps of the city to be used on the $13,000,000 super-highway plan. The city council appropriated $20,000 out of the paving bond fund to pay for initial engineering services.

New York consultants form Briggs Associates

Robert Wesley Briggs, Arthur G. Hayden, and George E. Strehan, consulting engineers with Salvatore Grillo, architect, have formed the consulting firm of Robert W. Briggs Associates with offices in New York City. Members of the firm have had widely varied experience in engineering construction.

The organization will engage in planning and development of postwar public works projects. Associated with the firm in an advisory capacity are James Kip Finch, W. J. Krefeld, D. M. Burmeister, N. V. Feodoroff, E. C. Ingalls, and R. J. Arnold of the civil engineering staff of Columbia University. Dennis Grillo, architectural engineer, and M. D. Brod, architect, are also connected with the new firm.

JOBS OF THE WEEK

FILL AND AIRPORT WORK, East Boston, Mass.

Gahagan Construction Co., New York, N. Y., has been awarded a contract for 12,000,000 cu. yd. fill and general airport construction work by Commonwealth of Massachusetts, Boston, at an estimated cost of $3,000,000.

STOREHOUSES, ROADS, TRACKS and SERVICES, Scotia, N. Y.

William L. Crow Construction Co., New York, N. Y., has been awarded a contract for 5 storehouses, by Bureau of Yards & Docks, Navy Department, Washington, D. C., at $1,947,500.

MILL, Deferiet, N. Y.

George A. Fuller Co., New York, N. Y., will construct a paper and pulp mill for the St. Regis Paper Co., New York, N. Y., at an estimated cost of $3,000,000. Charles T. Main, Inc., Boston, Mass. is the engineer.

IMPROVING WHARF, Long Beach, Calif.

City Harbor Department, Long Beach, Calif., received the lowest bid for wharf concrete paving, and track work at Pier A from Warren-Southwest, Inc., Los Angeles, at $1,097,721. Bidding on wharf work only the lowest bidder was E. B. Bishop, Orland, Calif., $677,155. R. R. Shoemaker, Long Beach is the city engineer.

HOUSING PROJECT, Wilmore, Pa.

Berwin & White Coal Mining Co., Philadelphia, Pa., awarded a contract for the construction of a 300-unit housing project to Durham & Irvin, Philadelphia, Pa., at an estimated cost of $1,500,000. Andrew K. Durham, Philadelphia is chief engineer for owner. Walter K. Durham, Philadelphia is the architect.

PLANT, Tiffin, O.

Austin Co., Cleveland, Ohio, will design and construct a plant to manufacture fractional horse power motors for the General Electric Co., Fort Wayne, Ind., at an estimated cost of $5,000,000.

WAREHOUSES, Sacramento, Calif.

Moore & Roberts, San Francisco, Calif., has been awarded a contract by the U. S. Engineers, Sacramento, for 4 warehouses, paving and utilities at Sacramento Air Depot, to cost $1,154,304.

CONCRETE RUNWAY, Fort Worth, Tex.

Texas Bitulithic Co., Dallas, Tex., was the lowest bidder when the U. S. Engineers, Denison, Tex., opened bids for extra heavy duty concrete runway at Fort Worth Army Airfield. The lowest bid was $1,935,000.

Note—Additional bidding and contract news on many projects large and small, including the above items, appear in the Construction News section beginning on page 16.

OBITUARY

Leonard D. Brownell, 67, district engineer of the State Department of Public Works for six counties in central New York since 1920, died at Utica, N. Y., June 12. Mr. Brownell joined the department in 1904 as resident engineer in Syracuse, remaining there until his assignment for work on highways and canals in Oneida, Madison, Herkimer, Montgomery, Fulton and Hamilton counties. From 1913 to 1915 he was with the department in Buffalo.

James Albert McDavitt, 59, retired civil engineer, died June 8 at his home in El Cerrito, Calif.

Henry Morgan Reed, 93, said to have been the oldest active surveyor in the United States until he retired two years ago, died in Chillicothe, Ohio, June 11. In 1887 he helped survey 17,000 acres in Pasadena, Calif., for city lots. He was city engineer in Chillicothe for 26 years.

Frank S. Hitch, retired highway construction engineer of Williamston, N. C., died June 3. He was connected with the North Carolina State Highway Commission from 1920 until his retirement last December.

G. M. Stroughton, 49, structural engineer and general manager of the Structural Steel and Forge Co. for nine years, died May 22 in Ann Arbor, Mich. A civil engineering graduate of Iowa State University, Mr. Stroughton served from 1926 to 1936 as structural engineer with the Steel Engineers Co. of Utah.

John W. Shroyer, 60, former supervisor for the Ohio Highway Department, died in Akron, O., June 8.

Logan D. Burd, 70, president of the Burd Construction Co., Canton, Ohio, who had been in the construction business there for 47 years, died June 9.

Robert P. Easley, 58, civil engineer, died June 10 in Oakland, Calif. In addition to working on state reclamation projects, Mr. Easley operated the Roberts Island Dredging Co. in Antioch for more than 15 years.

Henry Willet Stover, for many years associated with the Pennsylvania State Highway Department as a construction engineer for the Williamsport district, died June 9 at Langhorne Manor, Bucks County, Pa. Before taking over the Williamsport district position, Mr. Stover served for 25 years as road superintendent for Bucks County.

George K. Musselman, 89, a partner in Musselman and Hall, contractors, Kansas City, Mo., since the founding of the firm in 1904, died recently. He attended Franklin and Marshall College, and received his degree in civil engineering at Lehigh University.

Joseph E. LaPrade, 68, civil engineer and for many years a member of the firm of W. W. LaPrade and Brother, Richmond, Va., died there June 2.

Chandler H. Markley, 55, of Santa Clara, Calif., died there May 25. He was a retired civil engineer.

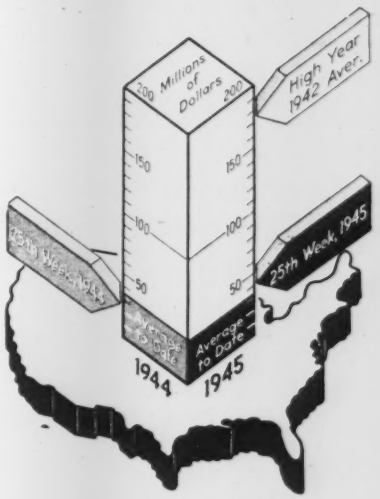
Herbert Cross, 68, engineer and founder of the engineering firm of Herbert Cross and Son, died June 10 at Bala Cynwyd, Pa.

Edwin Judson Perkins, 66, railroad builder and vice president of Rinehard & Dennis, Inc., construction contractors, died in Albemarle County, Va., June 13.

Rudolph G. Kasel, 45, Arlington, Va., who was chief of the surface water division of the U. S. Geological Survey, died June 14. He was a graduate of the Missouri School of Mines and Metallurgy and served in the Navy in the first World War. He entered the Geological Survey in 1924 as a junior engineer and became chief of the surface water division in 1941.

Charles A. Howard, technical director of the Inter-American Development Commission, died June 15 in Washington, D. C. Mr. Howard had headed the engineering section of the commission, a Pan-American body organized to study and develop Latin American business and industry, for two years. He headed an industrial mission to Haiti sponsored by the late President Roosevelt. Before joining the commission, he had conducted similar surveys in Latin America for Ford, Bacon & Davis, New York engineering consultants, and for various Latin American industrial concerns. A graduate of Massachusetts Institute of Technology, he had served as assistant to the chief engineer, Consolidated Edison Co.; chief engineer and vice president of Gunn, Richards & Co., New York consulting engineers; chief engineer of A. B. Leach & Co., and P. W. Chapman & Co., public utility and industrial operators, and treasurer and assistant to the president of United States Lines.

CONSTRUCTION ACTIVITY



As Reported This Week to...
Engineering News-Record

CONTRACT VOLUME

Continental U. S. Only
(Thousands of Dollars)

	Week of June 21 1945	Cumulative 1945 (25 wk.)	Cumulative 1944 (25 wk.)
Federal	$11,699	$465,585	$561,273
State & Municipal	12,173	121,865	100,105
Total Public	$23,872	$587,450	$661,378
Total Private	18,001	242,165	195,975
U. S. Total	**$41,873**	**$829,615**	**$857,353**

WHERE CONSTRUCTION ACTIVITY ORIGINATED THIS WEEK

Type of Work	Dollar Volume (Thousands) This Week	Cumulative 1945 (25 wk.)	Cumulative 1944 (25 wk.)
Waterworks	$599	$18,672	$13,173
Sewerage	638	13,779	13,203
Bridges	776	12,583	6,569
Highways	6,178	85,391	89,247
Earthwork, Waterways	317	16,647	30,684
Buildings, Public	8,305	300,907	324,883
Industrial	12,753	168,988	81,520
Commercial	3,990	42,100	88,081
Unclassified	8,317	170,548	209,993

NOTE: Minimum size projects included are: Waterworks and waterways projects, $15,000; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

NEW PRODUCTIVE CAPITAL

	Cumulative 1945 (25 wk.)	Cumulative 1944 (25 wk.)
NON-FEDERAL	$281,875	$194,572
Corporate Securities	79,670	85,345
State and Municipal	181,305	55,447
RFC Loans	20,900	53,780
FEDERAL	$251,010	$245,266
Total Capital	**$532,885**	**$439,838**

ENR INDEX NUMBERS

Index Base = 100		1913	1926
Construction Cost	June '45	308.99	148.53
Building Cost	June '45	239.37	129.40
Volume	May '45	93	41

CONSTRUCTION REPORTS

Compiled by Business News Department—Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.

ELSIE EAVES, Manager *SCOTT McLEOD, Statistics* *J. A. MAHONEY, Reports*

(Daily service also available—Write for details)

WATER SUPPLY

PROPOSED WORK

Ark., Camden—City, imprv. water sys. Marion L. Crist & Associates, Union Life Bldg., Little Rock, engrs.

Ark., Harrison—City, imprv. WW sys. $150,000. Marion L. Crist & Associates, Union Life Bldg., Little Rock, engrs.

Ind., Auburn—Bd. P. Wks., F. A. Potter, secy., plans completed 500,000 gal. elevated steel water storage tank. $100,000. Boyd E. Phelps, Inc., 622½ Franklin St., Michigan City, consult. engr.

Mass., Randolph—Town, W. C. West, chn. Bd. Water Comrs., Town Hall, preparing study pump equip. for W.W. to exceed $15,000. Coffin & Richardson, 68 Devonshire St., Boston, engrs.

Mass., Seekonk—Town, Water Dpt., Town Hall, preliminary plans complete water supply sys. Over $300,000. Whitman & Howard, 89 Broad St., Boston, engrs.

Va., Chester—Chesterfield Co., Courthouse, Chester, installation and purchase water supply sys. $20,000.

Wis., Allouez—Town, R 6 Green Bay, watermain extens., water softener, 11,218 ft. 6- to 10-in., c.i. pipe.

Alta., Mercoal—McLeod River Hard Coal Co., Ltd., Mercoal, about 9,000 lin. ft. 6 in. wood stave water pipe placement and hydrants. Over $25,000.

Man., Winnipeg — Municipality, WW imprvs. $200,000 voted. W. D. Hurst, City Hall, engr.

Ont., Crowland—Crowland Twp., Crowland, watermain, etc. $30,000.

Ont., Niagara Falls—Niagara Twp., W. Sheppard, reeve, J. Sterling, clk., made plans 64 x 30 x 10 ft., reservoir, 6 mi. 4 to 8 in. mains $285,000. B. Erwin, 602 Erie St., engr.

Ont., Ottawa—Nepeau Twp., A. E. Morris, clk., Westboro, installing watermains, various streets in Westboro. $17,200.

Ont., Port Carling—Town, G. C. Leask, clk., WW. $45,000. James, Proctor & Redfern, 36 Toronto St., Toronto, engrs. CD 11/21—ENR 11/30.

Ont., St. Thomas—Municipality, 6 in. watermains, $25,000. W. J. Peart, 474 Talbot St., engr.

Ont., Tilbury—Municipality, filter plant addn. $30,000. James-Redfern & Proctor, Ltd., 36 Toronto St., Toronto, engrs.

Ont., Toronto—North York Twp., Willowdale, H. D. Goode, clk., installing several miles watermains west to Dufferin St. and Sheppard Ave., North York, also provides well, water treatment plant, mains, overhead tank. $334,500. G. H. Baker, c/o owner, engr.

Que., Beaupre—Town, G. Godbout, secy., rein.-con. dam, installing 2 mi. pipeline. $50,000. C. Lessard, 32 Blvd. des Allies, Quebec City, engr. CD 4/5—ENR 4/19.

BIDS ASKED

Bids Asked June 25

N. Y., New York—Comr. Water Supply, Gas & Electricity, Municipal Bldg., Zone 7, houling, laying watermains, appurtenances W. 120, 124, 128 and 131 sts. Plans deposit $1; Leroy, 37, 107, 115 and 119 Sts. Plans deposit $1.

Ont., Islington—S. Barratt, clk. Etobicoke Twp., Islington, 14,500 lin. ft. 6- to 12-in. watermain supply and installation.

Bids Asked June 28

Va., Culpeper—Town at office of R. W. Huffman, mgr., Town Hall. Div. 1, complete filter plant bldg., coagulating basins, clear well, raw water intake and connecting pipe lines; Div. 2, 1 m.g. filter plant, incl. filters chemical mixer, chemical feed equip., etc., and hauling, erecting pump equip., Div. 3, pump. equip. Plans deposit $20. Wiley & Wilson, 907 Peoples Natl. Bank Bldg., Lynchburgh, consult. engrs.

Bids Asked June 29

†Tex., Longview—City, W. Morgan, works mgr., City Hall, Contr. 3, watermain exten., Tex. 41-710-N. **FWA.** Plans deposit $25. Freese & Nichols, Capps Bldg., Fort Worth engrs. CD 3/26—ENR 3/29.

Bids Asked July 5

Pa., Scranton — Scranton-Spring Brook Water Service Co., 135 Jefferson Ave. S., imprv. No. 4 Dam, near Carbondale. Plans deposit $5. T. H. Wiggin, 90 Broad St., New York, N. Y., consult. engr.; adv. ENR 6/21.

Symbols and Abbreviations Include:

†	Federal Government
★	Project of $500,000 or over
ENR	Engineering News-Record
CD	Engineering News-Record Construction Daily

Projects—By Size

Construction projects here reported cover the United States and Canada, are of these minimum sizes or larger; water supply, earthwork, waterworks, $15,000; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

Classes of Construction

(Name in order of Listing)

Water Supply
Sewers, Waste Disposal
Bridges
Streets & Roads
Earthwork, Waterways
Latin America
Public Buildings
Commercial Buildings
Industrial Buildings
Unclassified

Stages Reported

PROPOSED: (except Streets & Roads);

BIDS ASKED (new announcements only). For full calendar, see also preceding issues of ENR);

LOW BIDDERS: On jobs below $500,000 value all low bidder news will be the final reports published on the projects involved except where award is not made to the low bidder. In this case, a supplementary contract award report will be published.

CONTRACTS AWARDED: Except awards to low bidders previously reported in low bidder stage.

Dates shown are of issue in which last previous report was published.

Bids Asked July 9

Pa., Wilkes-Barre—Scranton-Spring Brook Water Service Co., 30 N. Franklin St., repairing, imprv. dam and spillway channel, incl. 15,000 cu. yd. earth and rock excav., 1,000 cu. yd. masonry excav., 2,600 cu. yd. stone and concrete masonry; 390 cu. yd. stone masonry paving, 58,000 sq. ft. paving, 2 span light truss foot bridge, etc. Plans deposit $1. T. H. Wiggin, 90 Broad St., New York, N. Y., consult. engr.; adv. ENR 6/21.

Bids Asked July 10

La., Gretna — Bd. Comrs. East Jefferson Waterworks Dist. 1, Jefferson Parish, J. W. Hodgson, Sr., pres., Gretna, furnishing, installing underdrain sys. also necessary sand and gravel for Filters 1, 2, 3 and 4

Bids Asked August 22

Que., Montreal — Executive Committee, City Hall, water intake supply lines for Municipality, J. A. Mongeau, city clk. Plans deposit $20. Dpt. P. Wks., 3161 St. Joseph St., Verdun, engr. CD 6/7.

Bids Asked

Conn., Bethel—Town Bd. Comrs., Town Hall (selected bidders) 1 mi. 14 in. watermain, Grossy Plain St. to Eureka Reservoir.

LOW BIDDERS

Wash., Seattle—City, County-City Bldg., 3 and James Sts., Zone 4, June 7, watermains in 37 Ave. N.E. and adjacent streets, from M. Moschetto, 5501 13 Ave. S., Zone 4, **$51,065.** Est. $58,240. CD 5/2—ENR 5/10.

Wash., Tacoma—City, City Hall, June 12, replacing 1 mi. pipe with 52 in. steel pipe, Rhodes Lake Sect. of Green River Gravity line, from Steel Tank & Pipe Co., 518 N.E. Columbia Blvd., Portland, Ore., **$88,364.**

CONTRACTS AWARDED

†Kan., Kansas City—U. S. Eng., 10 E. 17 St., Kansas City 16, Mo., completing Fairfax-Jersey Creek Pump. Plants 3 and 5, to L. G. Barcus & Sons Constr. Co., 1430 State St., **$34,627.**

Minn., South International Falls—Village, E. Lynch, clk., **water distr. sys.**, 16,000 lin. ft. 6 in. c.i. pipe, **hydrants, etc.,** to Nelson & Hafner, 115 Parkland Ave., Duluth, meters to Pittsburgh Equitable Meter Co., 400 N. Lexington Ave., Pittsburgh, Pa. $54,021. Bids 5/23. CD 5/8—ENR 5/10.

Mo., Marshall — City, City Hall, WW imprvs., c.i. **supply lines,** to J. O'Neil, 114 4 Ave., Leavenworth, **Kan., $152,437.** Bids 6/8. CD 4/11—ENR 4/19.

O., Bowling Green—City, City Hall, laying 3,000 ft. 6- to 12-in. **water supply main,** to R. P. Kohen, **80 Sturgis Ave., Mansfield, $25,519.** Est. $27,000. **Bids 6/4,** awarded 6/12. CD 5/22—ENR 5/24.

O., Cambridge—City, City Hall, piping and filter equip. for WW, to C. A. Miller, 321 N. 7 St., Zanesville, **$25,183;** addnl. filter unit at water treatment **plant,** to H. Hamm, Cambridge, **$21,449.** Bids 6/6. CD 5/9, 5/23—ENR 5/17, 5/24.

Pa., Aliquippa—Boro, E. W. Devitt, secy., Municipal Bldg., Contr. 35, constructing **wells, well houses, furnishing,** installing **pumps, piping, appurtenances,** to J. E. Kennelly, 1303 Oakridge St., Pittsburgh, **$34,437.** Bids 5/21. CD 5/8—ENR 5/10.

Tex., La Porte—City, drilling, developing water supply well, to Texas Water Wells, Inc., 6927 Appleton St., Houston, $15,675. CD 5/16—ENR 5/24.

†Tex., Weatherford—C. Russell, mayor, City Hall, water and sewer imprvs. Tex. 41-701-N. to H. Newton, Graham, $34,165. **FWA.** Bids 6/12. CD 5/17—ENR 5/24.

Wis., Horicon—City, C. F. Heft, clk., deep well, to Layne-Northwest Co., 709 N. 1 St., Milwaukee, Zone 3, **$16,350.** Bids 6/4. J. Donohue Engrg. Co., Sheboygan, engr.

Wis., Randolph—City, water softening and conditioning plant, to A. Schregardes, Randolph. **$14,660.** Bids 6/4. McMahon Engrg. Co., Menasha, engr.

WATER SUPPLY (Contracts Awarded, Cont'd.)

Ont., Burlington—Town, Miss A. Wilson, secy. Water Comn., two unit, 500,000 gal. each, reservoir sys., to A. Cope & Sons, Ltd., 19 Albert St., Hamilton, **$62,627.** G. H. Power, Bank of Toronto Chambers, Oakville, engr.

Que., Coaticook—Town, R. Dimont, secy., City Hall, pump house and sinking of artesian well and laying 10 ft. pipe, day labor, **$23,500.** A. Crepeau, 45 Wellington St. N., Sherbrooke, engr.

SEWERS, WASTE DISPOSAL

PROPOSED WORK

Ark., Harrison—City, imprv. sewerage sys. $165,000. Marion L. Crist & Associates, Union Life Bldg., Little Rock, engrs.

Ark., West Memphis—City, sewerage sys. $300,000. Marion L. Crist & Associates, Union Life Bldg., Little Rock, engrs. CD 12/15—ENR 12/21.

Calif., Los Angeles—Los Angeles Co., Hall of Records, 15,000 ft. 8 in. vitr. clay sanitary sewers in Lemoli Ave., C. I. 1055, $60,715; 2,280 lin. ft. in Ashworth St., CI 1109, $12,656. A. Jones, Hall of Records, engr.

Conn., Bridgeport—City, P. Brewster, dir. P. Wks., sewage plants alterations, imprvs., incl. installing 2 pumps, gate replacing 36 in. sluice gate, Harborview Ave. Stations, pumps and screens Bostwick Ave. and Congress St. plants. $25,000. H. Rowland, City Hall, engr.

Mass., Fitchburg—City, P. Wks. Dpt., City Hall, sanitary sewers Elm St. exten., etc. To exceed $25,000.

Neb., Beatrice—State Bd., Lincoln, sewage disposal plant at Institute for Feeble Minded. $77,000.

Neb., Norfolk—State Bd. Control, Lincoln, sewage disposal plant at State Hospital. $77,000.

Wis., Luxemburg—Village, C. Ross, clk., sewerage and WW sys. $125,000. McMahon Engrg. Co., Menasha, engrs.

Ont., Barrie—Town, A. W. Smith, clk., installing sanitary sewers various streets. $35,000. E. O. Rawson, c/o owner, engr.

Ont., Hamilton—City, City Hall, sewers in various city streets. $240,000. W. L. McFaul, City Hall, engr.

Ont., Linwood—Wellseley Twp., J. Heinbuck, clk., drainage. $30,000.

Ont., London—Council, making plans, exten. 8 in. sanitary sewer mains in Elgin and Saunders Sts. $30,000. Wm. Veitch, City Hall, engr.

Ont., Toronto—York Twp., H. A. Half, clk., 40 Jarvis St., Rockcliffe Sewage Disposal Plant exten., Rockcliffe Blvd., York Twp. about $45,000. O. M. Falls, 40 Jarvis St., engr. Gore & Storrie, 1130 Bay St., engrs.

Ont., Westboro (Postal Dist. Ottawa)—Twp. of Nepean, A. E. Morris, clk., Westboro, sewers. $25,000.

Que., Joliette—City, C. Bonin, clk., incinerator. $40,000. E. H. Lippe, c/o city engr. CD 4/18—ENR 4/26.

Que., Montreal—Municipality, sewers, $34,000.

Que., Price—Village, P. Bernbe, mayor, plans completed, sewerage sys. $47,000. P. H. Villeneuve, 6007 Dalorimier Ave., Montreal, engr. CD 2/7—ENR 2/15.

Que., Rawdon—Village, plans prepared sewerage sys. $35,000. Gohier & Dorais, 40 St. James St. E., Montreal, engrs.

BIDS ASKED

Bids Asked June 25

N. Y., St. George (sta. Staten Island)—President Richmond Boro, Boro Hall, Zone 1, reconstructing storm water sewer from Edgewater St., easterly about 400 ft., dredging Muddy Creek between Kissam and Fox Beach Aves., etc.

Ont., Islington—S. Barratt, clk. Etobicoke, Twp., Islington, 11,000 lin. ft. 8- to 15-in. sewers.

Bids Asked June 29

Man., Winnipeg—Chairman Health Com., Winnipeg, incinerator. Plans deposit $50. CD 2/15—ENR 2/22.

Bids Asked About July 1

Tex., Gonzales—City, G. C. Seydler, mayor, sewage disposal plant, pump. sta., primary settling tank, rock filter, final settling tank, sludge digestion tank, 2 sludge pits, Garrett Engrg. Co., 1806 Milam St., Houston, engrs. CD 5/15—ENR 5/17.

LOW BIDDERS

Colo., Denver—City, Mt. View Park special sanitary sewerage sys., from M. R. Latimer, W. 7 and Navajo Sts., **$120,941.**

Tex., Dallas—City, June 6, 6- to 45-in. storm sewers, Leland, Pine Sts., etc., from E. H. Reeder Const. Co., 4013 Glendora St., **$32,138.**

Tex., Dallas—City, c/o E. Goforth, secy., June 13, sanitary sewers, Beverly Hills, Lake Ave. and Nash St. area, from Ben Sira & Co., 3901 Elm St., **$53,557.** CD 6/5.

Wis., Green Bay—City, June 11, sanitary and storm sewerage sys., from Chapel & Amundson, 708 S. Bway., **$185,159.** CD 6/6.

CONTRACTS AWARDED

S. C., Charleston—City, City Hall, 3,500 lin. ft. 8 and 12 in. sewers, to Charleston Constructors, Inc., Tradd St. and Adger's Wharf, **$33,289.**

Tex., College Station—A & M College, College Station, filter and sludge drying beds, etc., pump pit, etc. to R. B. Butler, Bryan, **$25,000.** Bids 5/18. CD 5/1—ENR 5/3.

†**Wash., Sunnyside**—City, City Hall, sewage disposal plant, Docket 45304-N, to Goerig & Philp, Lloyd Bldg., Seattle, Zone 1, **$156,393.** Est. $150,000. **FWA.** Bids 6/8. CD 6/1—ENR 3/22.

Que., Megantic—Canadian Pacific Ry. Co., J. E. Armstrong, ch. engr., Windsor Station, Montreal, Zone 3, mechanical disposal plant, hoppers on 2 tracks, with conveyor to 3d track at rail yards, to Williams & Wilson, Ltd., 544 Inspector St., Montreal, about **$30,000.**

BRIDGES

PROPOSED WORK

★**New Jersey**—S. Miller, Jr., comr., State Hy. Dpt., Trenton, superstructure and with approach spans in Newark and Harrison for bridge Route 25A, Passaic River, between Newark, East Newark-Harrison, $6,000,000. C. F. Bedwell, acting state hy. engr.

O., Canton—City, made plans, bridge 15 St. S.W. $40,000. J. Shisler, city engr.

Ore., Portland—City, W. A. Bowes, comr., City Hall, overpass over railroad tracks, S. E. Hawthorne Blvd. $50,000. B. S. Morrow, City Hall, city engr.

N. B. Dorchester—Province of New Brunswick, Fredericton, bridge, Palmer Mill Pond. $30,000. Dpt. P. Wks., Fredericton, engr.

Que., Jonquiere—Town, P. E. Fortin, clk., and Canadian Natl. Rys., B. Wheelwright, ch. engr. (Oper.), 360-55 McGill St., Montreal, viaduct under Canadian National Rys. track, St. Hubert St. $75,000.

Que., Montreal—Municipality, repairing Ahuntsic Bridge, $32,000. C. J. Des Baillets, City Hall, engr.

BIDS ASKED

Bids Asked June 26

Iowa—State Hy. Comn., Ames, raising west end of Little Sioux River bridge, removing old concrete abutment and replacing with 20 ft. concrete frame approach span, on U. S. 20, Correctionville, FN-2, Woodbury Co. F. R. White, Ames, ch. engr.

Kansas—State Hy. Dpt., Lawrence, 60 ft.-70 ft.-70 ft.-60 ft., continuous I-beam span bridge, Proj. FAS196A, Douglas Co. R. C. Keeling, Topeka, engr.

Bids Asked July 6

Ia., Primghar—Bd. Supervs. O'Brien Co., Primghar, 23 rein.-con., box culvert and extens., two I-Beam bridges, concrete floor and creosoted wood substructure, 30⅝ mi. grading, etc. on local county roads. Over $25,000. W. L. Anderson, Primghar, co. engr.

Bids Asked July 9

New Jersey—S. Miller, Jr., comr. State Hy. Dpt., Trenton, replacement portion Brigantine Bridge across Absecon Channel between City of Atlantic City and City of Brigantine, incl. 744 lin. ft. trestle, steel pile bents, structural steel stringers, rein.-con. deck slab, Atlantic Co. Plans deposit $10; adv. ENR 6/21. CD 6/8—ENR 6/14.

New Jersey—S. Miller, Jr., comr. State Hy. Dpt., Trenton, Route 25 A Passaic River bridge piers on new crossing from Newark to East Newark-Harrison. C. F. Bedwell, acting state hy. engr.

LOW BIDDERS

Missouri—State Hy. Comn., Jefferson City, two 60 ft. I-beam span, steel pile bent bridge, over Grand River, road from Chillicothe S., Route 36, Proj. 25, Livingston Co., from Atkinson Windle Co., Chillicothe. **$26,281.**

Pennsylvania—State Dpt. Hys., Harrisburg, June 12, rein.-con. bridge, graded approaches over Lackawaxen River, Twp. Rd. 472, Texas Twp., Wayne Co., from Reed & Kuhn, Elysburg, **$25,800.** CD 6/7.

CONTRACTS AWARDED

Iowa—State Hy Comn., Ames, culvert repair, Project M-5280,ABCD, Keokuk, Wapello, Mahaska and Marion Counties, to F. A. Moser, Farmersburg, **$54,201.** Bids 6/12. CD 6/4—ENR 6/7, under Streets, etc.

★**Oregon**—State Hy. Comn., Salem, 810 ft. concrete bridge over Santiam River and 10 composite type pile trestles on Steiwer Hill-Albany Sect., Pacific Hy. east, SN-FAP 176 (9), Linn and Marion Counties, to C. J. Montag & Sons, N.E. 78 and Halsey Sts., Portland, **$545,924;** 395 ft. concrete Jefferson Junction Overcrossing, over Southern Pacific R.R., Pacific Hy. east, SN-RAP 176 (9), Linn Co., to Lindstrom Bros., Railway Exchange Bldg., Portland, **$64,160.** Awarded 5/30. R. H. Baldock, Salem, engr.

Wis., Green Bay—City, C. A. Centen, clk., bridge abutment and approach span for Mason St. Bridge, to Waterways Engrg. Corp., 1501 State St., **$37,800.** Bids 6/4, awarded 6/5. F. J. Steens, city engr.

Quebec—Dpt. P. Wks., Quebec City, rein.-con. bridge over Coaticook River, St. Mathieu De Dixville, to S. F. Walters, 60 Avenue des Pins, Quebec City, about **$27,000.**

STREETS AND ROADS

BIDS ASKED

Bids Asked June 25

Connecticut—State Hy. Comr., Hartford, rein.-con. paving 6,000 ft. 4 lane hy., Riverfront Blvd. and Park River St., Traffic Circle Hudson St., Hartford. Over $25,000. Plans deposit $17.51.

Bids Asked June 26

Iowa—State Hy. Comn., Ames, culverts, grading 0.34 mi. U.S. 20, FN-62, Black Hawk Co.; maintenance resurfacing 5.7 mi. Iowa 300, 11.3 mi. Iowa 183, and 9.5 mi. Iowa 127, Proj. M-4335, Harrison Co.; 3 mi. Iowa 9, 5.2 mi. Iowa 33, Proj. M-4234, Lyon and Osceola Counties; 36.3 mi. Iowa 100, 9.1 mi. U.S. 59, 1.3 mi. Iowa 362, Proj. M-4336, Pottawattamie Co.; 12.4 mi. Iowa 37, 10.5 mi. Iowa 191, 5.9 mi. Iowa 268, Proj. M-4337, Shelby Co.; maintenance cover aggregate surfacing, stockpiling involving 200 cu. yd. material Iowa 104 and Iowa 152, Proj. M-4330, Clark Co. F. R. White, Ames, ch. engr.

Kansas—State Hy. Dpt., Lawrence, concrete pavement patching 9.027 mi. Proj. 1807, Wyandotte Co. R. C. Keeling, Topeka, engr.

N. Y., New York—President Manhattan Boro. Municipal Bldg., Zone 7, repairing concrete malls and curbs on elevated public hy. and ramp approaches along West St. and Marginal St., between Duane and W. 59 Sts., constructing dividing malls on ramps between W. 46 St. and W. 48 St. and between W. 52 and W. 54 Sts., etc., Contr. 301.

Ohio—State Hy. Dpt., Columbus, asphaltic concrete resurfacing 3.461 mi. Sect. North Kingsville of SH 2, Ashtabula Co.; 2.681 mi. Sects. St. Clairsville and J-1 of SH. US 40, Belmont Co.; 1.501 mi. Sect. Galion of SH 201, Crawford Co.; 2.473 mi. Sects. Brecksville and Sagamore Hills of SH 36, Cuyahoga and Summit Counties; 0.278 mi. Sect. Olmstead Falls of SH 541, Cuyahoga Co.; 2.444 mi. Sect. G of SH 22, US 25, Hancock Co.; 0.557 mi. Sect. Millersburg of SH 145 and 241, US 62, Holmes Co.; 3.303 mi. Sects. O, G and Proctorville of SH 7, Lawrence Co.; 3.632 mi. Sect. B of SH 359, Licking Co.; 7.493 mi. Sects. S and A of SH 290 and 886, US 20, Lorain Co.; 3.528 mi. Sects. A and L of SH 52 and 275, US 20, Sandusky Co.; 6.092 mi. Sects. F-1, F-2 and E-1 of SH 220, US 25 and 68, Wood Co.; widening, asphaltic concrete resurfacing 4.32 mi. Sects. N and Akron, SH 888, Summit Co.; 6.137 mi. Sects. L, Lower Salem, K-1 and K-2 of SH 391, US 21,

STREETS, etc. (Bids Asked, Cont'd.)

Washington Co.; bituminous surface treating 37.34 mi. SH 33, 35, 324, 514, 325 and 953, Geauga Co., **$38,828**; drainage structures, erosion control 2.37 mi. Sect. Rome and P of US 52, Adams Co.

West Virginia—State Road Comn., D. McClaugherty, secy., Charleston, grading, draining, traffic bound base surfacing 1.061 mi. Bream Rd.-Kanawha Airport Rd., (Secondary Route 51/10), S. S. Proj. 6588, Kanawha Co.; cleaning, painting Aetnaville Bridge 1686 and Bridgeport Bridge 1687 over back channel of Ohio River, at Wheeling, S. P. 2064, Suspension Bridge 1688 and steel bridge 1689 over main channel of Ohio River at Wheeling, S. P. 2064, foregoing Ohio Co.

Bids Asked July 3

California—State Div. Hys., Sacramento, grading, imported base material and applying seal coat surfacing 0.17 mi. at Chadburn Creek about 13.4 mi. north of Fort Bragg, Mendocino Co.; plant mix surfacing 6 mi. between St. Joaquin Co. line and Livermore and between Niles and Sunol, Alameda Co.; plant mix surfacing over existing surfacing, reshaping shoulders and applying bituminous surface treatment thereto, applying seal coat to plant mix surfacing and liquid asphalt seal with sand cover to shoulders 8.7 mi. between San Ardo and King City, Monterey Co. G. T. McCoy, state hy. engr.

Bids Asked July 9

Mass., Brookline—Town, Bd. Selectmen, Town Hall, street construction, water pipes, sewer lines, drain, etc. in Chatham Circle, Still St. and Cushing Rd.

Bids Asked July 10

Calif., Los Angeles—Los Angeles Co., Rd. Dpt., Hall of Records, asphaltic concrete surfacing 1.1 mi. Washington Blvd., Anaheim-Telegraph Rd. to Vail Ave. Over $25,000. Plans deposit $5. O. F. Cooley, Hall of Records, engr.

New York—H. A. Cohen, dir. Bureau Contrs. & Accounts, State Office Bldg., Albany, bituminous macadam resurfacing 0.58 mi. Albany and Rensselaer Counties; 0.12 mi. and 0.87 mi. Chautauqua Co.; 1.29 mi. Onondaga Co.; 1.87 mi. Schenectady Co.; 5.47 mi. Seneca Co. Plans deposit $5 each; adv. ENR 6/21.

Bids Asked

Iowa—State Hy. Comn., Ames, received no bids June 12, imprv. 24.776 mi. Proj. MD-52, State; 1.925 mi. State Park No. 1-1945, State. CD 6/4—ENR 6/7.

Iowa—State Hy Com., Ames, rejected bids, June 12, paving, etc., access road to Firestone Truck Tire Plant, Iowa 60 just north of Des Moines, Polk Co. Will readvertise CD 6/18 under LB.

Kentucky—State Hy. Dpt., Frankfort, rejected bids June 8, imprv. 0.608 mi. streets in Bowling Green, Warren Co. CD 5/22—ENR 5/24.

Ohio—State Hy. Dpt., Columbus, rejected bids May 15, imprv. 3.528 mi. Sandusky Co.; 2.444 mi. Hancock Co. CD 5/21—ENR 5/24, under LB.

Ohio—State Hy. Dpt., Columbus, rejected bids May 29, imprv. 3.358 mi. Geauga Co., 4.886 mi. Muskingum Co., 3.781 mi. Clermont Co. CD 5/22—ENR 5/24, under LB.

S. C. Charleston—City, H. M. Lilienthal, purch. agt., new bids soon, granite or concrete curbing. Bids 5/31 rejected. $25,000 or more.

LOW BIDDERS

Alabama—State Hy. Dpt., Montgomery, June 8, imprv. 5.587 mi. Butler Co., from Phillips Constr. Co., Ashland, **$40,599.** CD 5/31.

California — State Div. Hys., 808 State Bldg., Los Angeles, June 7, imprv. 3.4 mi. Ventura Co., from Griffith Co., 1060 S. Bway., Los Angeles, **$114,735.** CD 5/23—ENR 5/31.

California—State Div. Hys., Sacramento, June 13, imprv. 10.1 mi. Kern Co., from Griffith Co., 1060 S. Bway., Los Angeles, **$53,960.** CD 5/25—ENR 5/31.

†Calif., Lathrop—U. S. Eng., 1209 8 St., Sacramento, Zone 8, paving facilities at Lathrop Holding and Reconsignment Point. Spec. 1127, from Geo. French, Jr., Box 307, Stockton. **$73,960.**

Illinois—State Hy. Dpt., Springfield, June 1, imprv. 18.7 mi. Madison and St. Clair Counties, from Blackwell Corp., 2006 St. Clair Ave., East St. Louis, **$77,586.**

Maryland—State Roads Comn., Baltimore, grading, drainage and macadam base course and surfacing 3.167 mi. Fort Meade Rd. to Laurel, Anne Arundel Co., from Williams Constr. Co., Middle River, **$232,381.**

New Jersey—State Hy. Dpt., Trenton, June 11, from Nesto Const. Co., 872 Bway., Newark, imprv. 28,000 sq. yd. Middlesex and Union Counties, **$248,873;** ½ mi. Hudson Co., **$66,270;** 0.437 mi. Monmouth Co., **$43,-925*****from Union Paving Co., 1.086 mi. Mercer Co., **$78,915.** CD 5/21—ENR 5/24.

Ore., Portland—City, J. O. Bredemeier, aud., City Hall, June 6, imprv. N.E. 35 Ave., N.E. 35 Pl. and N.E. 36 Ave. from Prescott to Killingsworth Sts., from P. W. Yett, 6500 N.E. Ainsworth St., **$48,162.** B. S. Morrow, City Hall, city engr.

★**Pennsylvania**—State Dpt. Hys., Harrisburg, June 12, from Bero Engineering & Const. Corp., McKinley Bldg., Buffalo, N. Y., imprv. 3.84 mi. hy. Lycoming Co., **$159,277;** 1.31 mi. Tioga Co., **$52,197;** 4.59 mi. Traffic Rte. 84, Tioga Co., **$186,561*****from Allegheny Asphalt & Paving Co., 411 Blvd. Allies, Pittsburgh, 1.36 mi. Allegheny Co., **$29,396*****from L. R. Owen, Johnstown, 2.21 mi. Blair Co., **$55,402*****from Mignatti Constr. Co., Glenside, 0.95 mi. Bucks Co., **$51,830*****from B. B. Constr. Co., Phillipsburg, 0.99 mi. Clearfield Co., **$32,930*****from Cayuga Constr. Corp., 30 Vesey St., New York 7, N. Y., 0.32 mi. Lancaster Co., **$261,-049*****from F. A. Ursitti, Eggertsville, N. Y., 4.66 mi. Mercer Co., **$191,949*****from Union Paving Co, 3933 Ridge Ave., Phila., 2.93 mi. Philadelphia Co., **$31,980*****from Baldwin Brothers Paving Co., Union Commerce Bldg., Cleveland, O., 4.05 mi. Venango Co., **$147,427*****from Dinardo Inc., 3310 Bouquet St., Pittsburgh, 1.79 mi. Westmoreland Co., **$78,228.** CD 6/7.

Washington — State Hy. Dpt., Olympia, June 12, imprv. 0.351 mi. King Co., from Fiorito Bros., 1100 Leary Way, Seattle, Zone 7. **$26,588.** CD 5/29.

Wash., Seattle—City, County-City Bldg., 3 and James Sts., Zone 4, June 7, asphaltic concrete resurfacing E. Union St., from Northwest Constr. Co., 3950 6 Ave. N.W., Zone 7, **$26,684.** Est. $40,406. C. L. Wartelle, County-City Bldg., city engr.

CONTRACTS AWARDED

Alabama—State Hy. Dpt., Montgomery, to Carlton Contg. Co., Albany, imprv. 13.295 mi. Monroe Co., **$31,495;** 18.718 mi. Greene Co., **$131,471;** 11.109 mi. Baldwin Co., **$28,-615;** 2.509 mi. Colbert Co., **$47,984***** to Noonan Const. Co., 814 E. Gregory St., Pensacola, Fla., 16.006 mi. Coffee Co., **$91,988.** Grand total $431,553. Bids 6/8. CD 5/31.

California—State Div. Hys., Sacramento imprv. 13 mi. Merced Co., to Louis Biasotti & Son, 40 W. Clay St., Stockton, **$180,748.** Bids 5/16, awarded 6/15. CD 5/22—ENR 5/24, under LB.

Idaho—State Hy. Dpt., Boise, imprv. 10.8 mi. state route from Craigmont west, 15.32 mi. U. S. 95 and 9.15 mi. road between Lewiston and Spalding, Lewis, Idaho and Nez Perce Counties, to McAltee & Heath, 3527 Trent St., Spokane, Wash., **$35,384;** est. $37,000; 35.73 mi. Lemhi and Clark Counties, to Western Constr. Co., north of City, Pocatello, **$75,837,** est. $92,000. Bids 6/8. CD 6/1.

Ia., Allison—Bd. Supers, Butler Co., Allison, grading various secondary roads to M. T. and J. T. McGuire, Algona, **$57,389.** Awarded 6/12. W. S. Chapman, Allison, acting co. engr.

Ky., Louisville—City, resurfacing River Rd. from Cable to 6 Sts., to Louisville Asphalt Co., 240 E. Lee St., **$26,859.**

Mich., Detroit—Wayne Co. Rd. Comn., Detroit, widening concrete pavement on 1 mi. Five Mile Rd., to Wier Const. Co., 7405 Jos. Campau Ave. **$39,908.** Bids 6/4. CD 5/25.

Miss., Clearwater—Town, J. M. Calicot, clk., bituminous surfacing 2.2 mi. streets, to Forcum James Co., Dyersburg, Tenn., **$30,000.**

†N. C., Wilmington—U. S. Eng., Post Office Bldg., Savannah, Ga., access road and radio range at Bluethenthal Field, to L. H. Simkins, Augusta, Ga. **$25,663.**

Ohio—State Hy. Dpt., Columbus, imprv. 26.37 mi. Lucas and Wood Counties, to A. W. Burns Constr. Co., 424 Woodland Ave., Columbus, Zone 10, **$45,925,** est. $50,305*** 18.09 mi. Guernsey and Muskingum Counties, and 20.74 mi. Coshocton and Muskingum Counties, to C. J. Shelly, Thornville, **$42,894** and **$35,901** respectively, est. $44,087 and $37,931 respectively***20.48 mi. Fulton and Williams Counties, to F. R. Creager, Liberty Center, **$46,674,** est. $47,897***4.973 mi. Franklin and Delaware Counties, to The Union Asphalt Materials Co., R. D. 2, Ostrander, **$63,827** est. $78,060***7.711 mi. Fayette Co., to The Clinton Constr. Co., Wilmington, **$95,254,** est. $104,780*** Cuyahoga Co., to The Horvitz Co., Midland Bldg., Cleveland, Zone 12, est. $27,700***3.181 mi. Crawford Co., Mansfield Asphalt Pav. Co., 153 Orange St., Mansfield, **$33,698,** est. $38,700*** Allen Co., to Churchill Constr. Co., State St., Lima, **$53,148,** est. $57,100 total $441,955. Bids 6/12. Rejected bids June 12, imprv. 1.992 mi. Jefferson Co. CD 5/29—ENR 6/7.

O., Columbus—City, resurfacing portions Cleveland Ave., Mound St. and Scioto River to R. J. Dienst, 297 S. High St., $29,540. Est. $30,000. P. W. Maetzel, city engr.

O., Columbus—Curtiss-Wright Corp., 4300 E. 5 Ave., resurfacing, patching company parking lots, to General Const. Co., 337 S. High St., **$30,000.**

O., Elyria—Bd. Comrs. Lorain Co., resurfacing, spot oiling, patching, 30 mi. hys., to H. J. Hart, P. O. Box 392, **$58,334.** Est. $59,540. Bids 5/23. CD 5/15—ENR 5/17.

O., Hamilton—Butler Co., Hamilton, bituminous material resurfacing Contrs. A and C, to Walter L. Follmer, P. O. Box 177, **$25,230,** est. $25,490, and **$30,173,** est. $30,227 respectively; Contr. B, to L. P. Cavett, 517 Shepherd Ave., Lockland, Zone 15, $28,384, est. $28,467. Grand total $83,787. Bids 5/21. F. Hammerle, Hamilton, co. engr.

O., Marion—Marion Co., Marion, drag and surface treating hys., to U. S. Const. Co., 115 E. Johnson St., Upper Sandusky, $34,431. Est. $40,000. Bids 5/24. W. W. Johnson, Marion, co. engr.

O., Martins Ferry—Bd. Comrs. Belmont Co., Martins Ferry, bituminous treatment Sect. A. of Bannock-Lafferty-Mt. Hope Rd., in Richland and Union Twps., to Tri State Asphalt Corp., S. Bway., **$47,857.** Est. $50,000. Bids 6/11. G. C. Travis, Martins Ferry, co. engr.

O., Springfield—City, liquid asphalt and liquid tar resurfacing various streets, to A & B Street Oil & Tar Co., Warder St., **$72,072;** resurfacing various streets, to R. J. Kavanaugh, 2015 W. Jefferson St., $61,-455. W. J. Lucas, city engr.

O., Toledo—J. W. Jewhurst, dir. Pub. Serv., City Service Dpt., repairing approx. 332,000 sq. ft. sidewalk surface, North and East Dists., to E. K. Bridge Constr. Co., Maumee, **$52,115;** West and South Dists., to C. A. Schoen, 4033 Pitch Rd., **$42,810.** Bids 5/29, awarded 6/12. CD 5/17—ENR 5/24.

O., Warren—Bd. Comrs. Trumbull Co., surface treating 71.63 mi. roads, to Bower & Taylor, Kinsman, **$35,000** (labor only). Total est. $61,712. Bids 5/28. H. L. Dittmer, Warren, co. engr.

★**Oregon**—State Hy. Comn., Salem, grading, paving 3.92 mi. North Unit Steiwer Hill-Albany Sect. Pacific Hy. East, Pat. Strategic Hy. Network Project SN-PAP 176 (9) Marion Co. and 5.93 mi. South Unit same hy., SN-FAP 176 (9), Linn Co., to Warren Northwest, Inc., N. 102 St. and Warren Rd., Portland **$777,725** (Comb.)*** surfacing 11.05 mi. Root Creek-Siletz Sect., Siletz Secondary Hy., DA-RM 93 (1), Lincoln Co., to E. C. Hall, Tigard, **$92,014***** grading, surfacing, oiling 9.85 mi. Crater Lake-Fort Klamath Timber Access Rd., DA-RM 92 (1), Klamath Co., to Rabler Bros. 4617 S.E. Milwaukee St., Portland, **$70,694.** Grand total $935,433. Awarded 5/31. R. H. Baldock, Salem, engr.

Tex., Houston — City, asphaltic surface treating, streets, Sect. C, to G. Mora, Box 2623, **$38,504.**

Tex., San Antonio—Hill County Estates, Inc., 402 Frost Bank Bldg., 4 mi. flexible base road. Owner builds. **$30,000.** F. T. Drought, 503 Frost Bank Bldg., engr. Bids 4/16. CD 4/11—ENR 4/19.

Washington — State Hy. Dpt., Olympia, imprv. 124.34 mi. Chelan, Douglas, Grant and Okanogan Counties, to Diesel Oil Sales Co., 2155 Northlake Ave., Seattle, Zone 2, **$91,589;** 7.6 mi. Pend Oreille Co., to F. R. Hewett Co., 420 W. 22 St., Spokane, $43,650. Bids 6/12. CD 5/29.

Wash., Seattle—City, County-City Bldg., 3 and James St., Zone 4, paving Island Dr., to Fiorito Bros., 1100 Leary Way, Zone 7, **$26,861.** Bids 5/31, awarded 6/7. CD 5/22—ENR 5/24.

Wash., Spokane—Spokane Co., Courthouse, imprv. 64.8 mi. hy., to Standard Asphalt Paving Co., Chronicle Bldg., **$81,685.** Bids 6/11.

West Virginia—State Road Comn., Charleston, to Murphy Constr. Co. Morgantown, imprv. 37.95 mi. Hardy Co., **$57,318;** 11.7 mi. Pendleton Co., **$43,513,** 11.7 mi. Tucker

STREETS, etc. (Contracts Awarded Cont'd.)

Co. **$31,073*****to Asphalt Products Co., Martinsburg, 4.28 mi. Jefferson Co., **$35,939***** to Amos Constr. Co., Clarksburg, 18.3 mi. Ritchie Co., **$26,683*****to J. M. Francesca & Co. Fayetteville, 10.9 mi. Wayne Co., **$26,669*****to Potomac Constr. Co., Martinsburg, 12.6 mi. Jefferson Co., **$30,875*****to John A. Archer & Son, Wytheville, Va., 0.081 mi. Fayette Co., **$30,853*****to Harry Hatfield & Co., Barboursville, 12.5 mi. Logan Co., **$39,594*****to Brown & Wright, Princeton, 27.6 mi. Mingo Co., **$49,937.** Grand total $382,454. Bids 6/12. CD 6/1—ENR 6/7.

Alta., Lethbridge—Municipality, street surfacing, day labor. **$26,000** voted. J. Haines, City Hall, engr.

British Columbia—Provincial Govt., Victoria, roadwork, Sect. 1, to Commonwealth Const. Co. Ltd., 670 Taylor St., Vancouver, **$46,740*****Sect. 2, to Columbia Bitulithic Ltd., Granville Island, Vancouver, **$50,542*****Sect. 3, to Williams & Carruthers, Ltd., 2965 E. Hastings St., Vancouver, **$30,067***** Sect. 4, to Dawson, Wade & Co., Ltd., 775 Clark Dr., Vancouver, **$81,404.** Grand total $208,753.

B. C., Courtenay—Municipality, sidewalks, day labor. **$25,000.**

N. S., Dartmouth—Municipality, curbs, gutters and sidewalks, day labor. **$25,000.**

Que., Three Rivers—Municipality, bituminous penetration treatment and paving, to Page Equipment Co. Ltd., 1497 Craig St. Est. **$40,000.**

Que., West Brome—Prov. Dpt. P. Wks., Quebec City, rein.-con. bridge over Yamaska River to R. and B. A. Ryan, Ltd., 1017 William St., Montreal, **$25,000** plus. O. Desjardins, c/o owner, engr.

EARTHWORK, WATERWAYS

PROPOSED WORK

†**Indiana**—U. S. Eng., 612 Federal Bldg., Louisville 1, Ky., flood wall protecting Jeffersonville-Clarksville Dist. along Ohio River, Clark Co. $1,096,000.

★†**Indiana**—U. S. Eng., 612 Federal Bldg., Louisville 1, Ky., flood wall protecting Evansville-Howell Dist. along Ohio River, Vanderburgh Co. $2,400,000.

N. S., Lunenburg—Lunenburg Foundry Co. Ltd., Lunenburg, breakwater crib and road. $35,000.

BIDS ASKED

Bids Asked June 25

N. Y., Brooklyn—Comr. Marine & Aviation, Pier A, foot Battery Pl., North River, New York, Zone 4, repairs and renewals fender sys. bulkhead wall along easterly side of Gowanus Canal, Hamilton Ave., etc. Contr. 2437. Plans deposit $2.50.

Bids Asked June 27

Mich., Mason—G. Graham, Ingham Co. Drain Comr., Twp. Hall, Dansville, constructing Doan Creek Drain, Leroy, Wheatfield, Ingham, White Oak and Stockbridge Twps., Contr. 1, excavating 14.533 mi. open drain, involving approx. 258,033 cu. yd. excav., Contr. 2, constructing 3 highway bridges and 3 culverts. Plans deposit $3. Wolverine Eng. Co., Mason, engr.

Bids Asked June 29

†**Louisiana**—U. S. Eng., foot of Prytania St., New Orleans, approx. 715,000 cu. yd. new uncompacted fill or 525,000 cu. yd. new compacted fill, Lopez Levee Exten., in Pontchartrain Levee Dist., Sol. No. 16-047-45-170, Item L-217, East Baton Rouge Parish.

†**Washington**—Bureau Reclamation, Court House, Denver, Colo., furnishing, del. f.o.b. cars shipping point or f.o.b. cars Odair, rubber seals for floating caisson for maintenance spillway bucket of Grand Coulee Dam, Columbia Basin Proj., Spec. 1808-D.

Bids Asked July 12

Montana—State, Madison Co., Water Conservation Bd., Helena, concrete spillway on dam at Willow Creek, Madison Co. $60,000. T. Karkainen, Armory Bldg., Helena, engr.

Mont., Lewistown—State Water Conservation Bd., **Helena,** concrete dam replacing rock structure on Spring Creek. $53,000. T. Karkainen, Armory Bldg., Helena, engr.

Bids Asked July 16

†**California**—Bureau Reclamation, Court House, Denver, Colo., 5.6 mi. Friant-Kern Canal from west of Friant Dam to Clovis-Auberry Hy. at Little Dry Creek, Central Valley Proj., Fresno Co. Tentative date.

Bids Asked July 18

†**Calif., Friant**—Bureau Reclamation, Friant, earthwork, concrete lining and structures, Station 6 plus 10 to Station 301 plus 60, Friant-Kern Canal, Friant Div., Central Valley Project, near here, Spec. 1099.

Bids Asked July 27

†**Mont., Dodson**—Bureau Reclamation, Malta, Dodson Pump. Plant, earthwork and structures, Dodson Pump Canal and laterals, Milk River Proj., incl. 54,200 cu. yd. excav., 276 yd. concrete, 36,000 lb. reinforcing steel to place, installing pump. unit, Spec. 1806-D.

LOW BIDDERS

Calif., Los Angeles—Los Angeles Co., Hall of Records, June 12, East Compton Creek 1 Drainage Sys. near Walnut Park, from Chas. H. Johnston, 530 N. Martel Ave., **$92,676.** CD 4/23—ENR 4/26.

O., Findlay—Hancock Co., Findlay, May 26, imprv. McComb Joint County Hutson and Thomas Ditch, from Dorsey Constr. Co., 1130 S. Main St., **$38,888.** M. J. Stough, co. engr. CD 5/15—ENR 5/17.

CONTRACTS AWARDED

†**Ark., Conway**—U. S. Eng., 300 Bway., Little Rock, constructing loop levee in Faulkner County Levee Dist. 1, to D. B. Hill, 115 N. Spring St., **$14,915.**

N. D., Fargo—Cass Co., F. F. Doherty, aud., drains cleaned out, repairs, to Zontelli Bros., Ironton, Minn., **$18,000.** Bids 5/23.

R. I., Warwick—State of Rhode Island and Providence Plantations, Div. Purchases, State House, Providence, repairing bulkhead and bathhouse, Goddard Park, to Campanelli & Cardi Constr. Co., 50 prague St., Warwick, and Seaboard Constr. Co., 201 Marginal St., Chelsea, Mass., **$28,415.** CD 5/21—ENR 5/24.

†**Tex., Corpus Christi**—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash. 25, D. C., dredging, Naval Air Station, NOY 11889, to Standard Dredging Corp., 80 Broad St., New York 4, N. Y., **$135,456.** CD 3/27.

†**Tex., Corsicana**—U. S. Eng., 606 Santa Fe Bldg., Galveston, levee repairs, Navarro County Dist. 8, Trinity River and Trinity Tributaries, CI-13, to McDonald Bros., 926 Valencia St., Dallas, **$28,000.** Est. $50,000. Bids 6/7. CD 5/29.

LATIN AMERICA

Argentina, Rio Negro—Syndicate c/o Dpt. P. Wks., Buenos Aires, plans plant for production electrolytic potassium chlorate, also to mfg. calcium carbide and insecticides. $300,000.

Bolivia, Caicona—Republic of Bolivia, La Paz, plans sulfuric acid plant. $350,000. Ministry of Defence, La Paz, engr.

Bolivia, Cochabamba—Republic of Bolivia, La Paz, plans dwellings. $100,000.

Bolivia, Orura—Republic of Bolivia, La Paz, plans dwellings. $150,000.

Bolivia, Potosi—Republic of Bolivia, La Paz, plans dwellings. $95,000.

Brazil, Bala—Brazilian National Petroleum Council, Rio de Janeiro, plans cement plant having initial production 120 metric tons cement daily. $250,000.

Brazil, Pernambuco—Central Electrica de Recife, Rio de Janeiro, plans increasing hydro-electric development to 13,750 kw. steam plant.

Brazil, Porto Alegre—Usina Nova of Porta Alegre, Porto Alegre, plans increasing hydro-electric development from 16,544 to 20,000 kw. steam plant. $310,000.

★**Brazil, Rio de Janeiro**—Cia de Carris Luze Forca, Rio de Janeiro, plans light and power plant extens. Over $350,000.

Brazil, Rio de Janeiro—Republic of Brazil, Rio de Janeiro, making surveys hydro-electric development, 150,000 hp. at Rio Grande-Marimhondo Cascade, 440,000 hp. at San Francisco River-Paulo Afonson Cascade; 340,000 hp. at Iquacu River-Santa Maria Falls; 250,000 hp. at Parana River-Seven Falls, 1,500,000 hp. at Parana River-State Quedas Falls, Brazilian National Comn., Rio de Janeiro, engr.

Brazil, Sao Paulo—São Paulo Tramway Light & Power Co. Ltd., Sao Paulo, plans increasing hydro-electric power from 380,000 hp. to 1,000,000 hp. and other imprvs. to sys. $500,000 plus.

B. W. I., Hamilton—Govt. of Bermuda, Hamilton, plans by Dpt. Works, Hamilton, maternity home. $150,000.

Chile, Santiago—Caza Nacional, Santiago, plans constructing over 5 year period, dwellings. $3,000,000.

Chile, Talcahuano—Pacific Steel Co., Santiago, plans steel plant, on San Vincente Bay, 300 mi. south of Santiago. $10,000,000.

Colombia, Barranquilla—Republic of Colombia, Bogota, plans dredging Magdalena River. $100,000. Dpt. P. Wks., Bogota, engr.

Colombia, Barranquilla—Republic of Colombia, Bogota, plans loading and unloading facilities, warehouses, etc. $150,000. Dpt. P. Wks., Bogota, engr.

Colombia, Bogota—Municipality, plans water sys. exten. $500,000.

Colombia, Bogota—Republic of Colombia, Bogota, plans grain elevator. $200,000. Institute Nacional de Abastecimiento, Bogota, engr.

Colombia, Bogota—Republic of Colombia, Bogota, plans abattoir. $100,000. Engineer, c/o Caza de Credito Agrario, Bogota.

Colombia, Bogota—Republic of Colombia, Bogota, plans soda ash plant. $100,000.

Colombia, Bogota—Shell Oil Ltd., Bogota, plans 70,000 bbl. refinery. Over $300,000.

Colombia, Buenaventura—Republic of Colombia, Bogota, plans wharves exten. and constructing warehouses. $200,000. Ministry P. Wks., Bogota, engr.

Colombia, Buenaventura—Republic of Colombia, Bogota, plans constructing pipeline. $100,000. National Railways, Bogota, engr.

Colombia, Cartagena—Republic of Colombia, Bogota, plans warehouse and loading and discharging facilities. Over $100,000. Dpt. P. Wks., Bogota, engr.

Colombia, Paz del Rio—Republic of Colombia, Bogota, plans steel plant. $300,000 or more.

Colombia, Santa Marta—Republic of Colombia, Bogota, plans reconstructing and exten. Port of Santa Marta. $310,000. National Railways, Bogota, engr.

Colombia, Tobia—Republic of Colombia, Bogota, plans hydro-electric plant. Over $1,000,000.

Colombia, Tumaco—Republic of Colombia, Bogota, extensive imprvs. and exten. Port of Tumaco. $200,000. National Railways, Bogota, engr.

Cuba, Guantanamo—Republic of Cuba, Havana, plans drainage project. $1,500,000 voted. Dpt. P. Wks., Havana, engr.

Cuba, Guantanamo — Republic of Cuba, Havana, plans WW project. $1,572,919 voted. Dpt. P. Wks., Havana, engr.

Cuba, Havana—Republic of Cuba, Havana, will repair and construct city streets by day labor. Voted **$277,000.**

Cuba, Havana—Republic of Cuba, Havana, plans reconstructing jail. $200,000. Dpt. P. Wks., Havana, engr.

Cuba, Havana—Republic of Cuba, Havana, plans airport exten. $150,000. Civil Aviation Comn., Havana, engr.

Cuba, Havana—Republic of Cuba, Havana, plans water supply imprvs., extens. $175,000. Dpt. P. Wks., Havana, engr.

Cuba, Havana—Republic of Cuba, Havana, plans sewerage sys. exten. $210,000. Dpt. P. Wks., Havana, engr.

Cuba, Havana—Republic of Cuba, Havana, plans constructing "Palace of Workers." $772,000 voted. Dpt. P. Wks., Havana, engr.

Cuba, Havana—Republic of Cuba, Havana, plans 6,000,000 lb. farm products cap. cold storage plant. $150,000. Ministry of Agriculture, Havana, engr.

Cuba, Havana—Republic of Cuba, Havana,

LATIN AMERICA (Cont'd.)

plans bridge construction and repair. $876,-792 voted. Dpt. P. Wks., Havana, engr.

Cuba, Santiago de Cuba—Republic of Cuba, Havana, plans WW project $1,955,104 voted. Dpt. P. Wks., Havana, engr.

French Guiana, Cayenne—Colonial Govt., Cayenne, plans water chlorinating plant and other water sys. imprvs. $125,000. Bd. Works, Cayenne, engr.

French Guiana, Cayenne—Colonial Government, Cayenne, plans electric power station. $200,000. Bd. Works, Cayenne, engr.

French West Indies, Fort de France—Colonial Govt., Fort de France, plans college for girls, $150,000; detention hospital for insane, $100,000; general council bldg., $300,-000. Lazaret for lepers, $75,000. Bd. Works, Fort de France, engr.

French West Indies, Fort de France—Colonial Govt., Fort de France, plans harbor imprvs. 27,000,000 Francs. Bd. Works, Fort de France, engr.

French West Indies, Fort de France—Colonial Govt., Fort de France, plans airport. 15,000,000 francs. Bd. Works, Fort de France, engr.

French West Indies, Fort de France—Colonial Govt., Fort de France, plans water supply sys. 30,000,000 Francs. Bd. Works, Fort de France, engr.

Haiti, Port Au Prince—Republic of Haiti, Port Au Prince, plans grain elevator, Artibonite Valley. $180,000. P. Wks. Admin., Port Au Prince, engr.

Honduras, San Pedro—Republic of Honduras Tegucigalpa, plans water supply sys. extens. $175,000. Servicio Cooperative Interamericano de Salud Publica, Tegucigalpa, engr.

Mexico—State of Colima, Governor Manuel Gudino, Colima, will repair roads in Colima, Manzanillo, Tecoman and Cerro de Ortego, by own forces. **$250,000.**

Mexico—State of Sinaloa, Teodora Cruz, gov., Capital City, plans completing several irrigation projects underway. $3,000,000.

Mexico—State of Sonora, Abelardo L. Rodriquez, gov., Capital City, Hermosilla will construct, repair state roads, mostly in central Sonora serving mining regions, by own forces. **$150,000.**

Mexico—State of Tamaulipas, Secy. Agriculture, Marte Refugio Gomez, dir., Mexico City, plans state-wide irrigation, some paving, water, sewerage, biggest projects in Mier, Reynosa and Camargo. $12,000,000.

Mexico, Acapulco—Fraccionadora de Acapulco, S.A., (Albert Pullen), Edificio Guadiola, Madero St., Mexico City, plans imprv. resort town, incl. paving streets, water sys., sewage, 5 hotels with 900 tourist capacity, swimming pools, social clubs, etc. $30,000,000.

Mexico, Alvarado—State of Vera Cruz, Gov. A. Ruiz Cortines, Capital City, Jalapa, bids within 90 days refrigerator plant, relieving ice shortage. $100,000.

Mexico, Balderas—Salico S.A., Balderas, plans salicylates, phenol and acetic acid production plant. Over $100,000.

Mexico, Cordoba—City of Cordoba, State of Vera Cruz, Mexico, plans widening streets, setup parking, water and drainage sys., etc. $900,000.

Mexico, Daxho—State of Mexico, Toluca, takes bids within 90 days, irrigation dam, near here. $250,000.

Mexico, Ensenada — Territory of Baja, (Antonio Espinosa), Ensenada (north district), Baja California, takes bids in fall, constructing docks and wharfs. $300,000.

Mexico, Gante—Quimica Industrial Marineda, S.A., Gante, plans sodium arsenate, sodium nitrate, etc. production plant. $250,000.

Mexico, Hermosillo—Union Reg. Canadera de Sonora, Hermosillo, Sonora, plans meat packing house. $2,150,000. D. Dohm, C. H. Settage, A. H. Haeseler, St. Louis, Mo., U. S. A., engrs.

Mexico, Manzanillo — National Railways, Pablo M. Hernandez, dir., 19 Bolivar, Mexico City, bids within 90 days railroad lines connecting Manzanillo port with new island port on lake of Cuyatian. $2,000,000.

Mexico, Matamoros—Dpt. P. Wks. & Communications, Mexico City, plans exten. Intracoastal Canal 350 mi. between Matamoros and port of Tuxpam. $4,000,000.

Mexico, Mexico City—Jesus G. Cajigal, Rio Amur, 28, takes bids within 60 days, apartment house, Rio Amur. $300,000. A. J. Perez, Mexico City, archt.

Mexico, Mexico City—Salvador Lutteroth, Peru, 73, Mexico, D. F., plans boxing-wrestling arena. $215,000.

Mexico, Mexico City—Petroleos Mexicanos, Mexico City, plans drilling 71 wells and pipeline on Paza Rica-Irapuato field. $250,000.

Mexico, Mexico City—Productos Victor, S.A. (Lic. Justo Sierra, mgr.), Reforma, 1-204-10, Mexico, D.F., plans factory for metallic articles. $500,000.

Mexico, Mexico City—Propulsora Industria, S. A., Mexico City, bids within 90 days office bldg., Morelos 45, $425,000. Guillermo Ortega Hay, Mexico City, archt.

Mexico, Mexico City—Republic of Mexico, Mexico City, plans market place for fish, meat, etc., equipped with refrigerator sys. $200,000. Dpt. P. Wks., Mexico City, engr.

Mexico, Mexico City—Sistema Signode de Mexico, Barcelona, 18, Mexico, D.F., plans factory for iron hoops for packing cases. $150,000.

Mexico, Mezquital—State of Hidalgo, Vicente Aquirre, Capital City, Puchaca, bids within 30 days, erecting small dams vicinity Mezquital for irrigation. $300,000.

Mexico, Monclova—Altos Hornos de Mexico S.A., Monclova, Coahuila, plans steel plant addn., housing blast furnace and another housing sheet metal department. $100,000.

Mexico, Monterrey—City of Monterrey will construct, repair roads in Monterrey and surrounding towns, by own forces. **$150,000.**

Mexico, Monterrey—Yesera Monterrey, S. De R. L., Hidalgo Poniente, 674, Monterrey, plans calciminated plaster factory. $150,000.

Mexico, Puebla—State of Puebla, Capital City, Puebla, plans electric plant, serving city of 100,000. $1,000,000.

Mexico, Tuxpan—State of Vera Cruz, Gov. A. Ruiz Cortines, Capital City, Jalapa, bids within 90 days refrigerator plant, relieving ice shortage. $100,000.

Mexico, Vera Cruz—State of Vera Cruz, Gov. A. Ruiz Cortines, Capital City, Jalapa, bids within 90 days refrigerator plant, relieving ice shortage. $100,000.

Mexico, Villa Acuna—Dpt. P. Wks. & Communications, Mexico City, plans paved hy. between Villa Acuna and Morelos. $750,-000.

Panama, Ocu—Social Security Admin., Panama City, plans school construction. $324,118.

Panama, La Palma—Republic of Panama, Panama City, plans radio station, etc. $100,000.

Panama, Panama City—Bank of Urbanization & Rehabilitation, Panama City, plans housing for workers. $500,000.

Panama, Panama City—Cia Panamena de Fuerza Y Luz, Panama City, plans power and light extens. $300,000.

Panama, Panama City—Electric Utility Co., Panama City, plans power and light services for suburbs outside of city. $600,000.

Panama, Panama City — Social Security Admin., Panama City, plans 120 apartments. $374,000.

PUBLIC BUILDINGS

PROPOSED WORK

†Ala., Birmingham — Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., 664 bed medical and surgical hospital.

★ **†Ala., Mobile**—City, City Hall, rejected bids May 24, hospital. **FWA.** Will readvertise. CD 5/29—ENR 5/31, under LB.

†Ala., Montgomery — Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., 268 bed (conversion) addn. to T.B. hospital.

†Ala., Tuskegee—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., 174 bed N.P. Hospital addn.

†Calif., Los Angeles—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., 203 domiciliary beds for female beneficiaries.

†Calif., San Bernardino—Pub. Housing Auth., NHA, 760 Market St., San Francisco, 135 temporary family dwelling units. Calif. 4157.

†Calif., San Diego—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., 300 bed medical and surgical hospital.

†Calif., San Fernando—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., 300 bed addn. to T.B. hospital.

★ **†Colo., Anvil Points**—Bureau Mines, Denver, plans completed oil-shale demonstration plant, $1,500,000; 1½ mi. aerial tramway, taking shale from mine to plant, $150,-000. B. Guthrie, c/o owner, engr. CD 4/19—ENR 4/12.

†Colo., Denver—U. S. Eng., 909 E. 17 St., Denver, semi-permanent addn. to Separation Center, Fitzsimons General Hospital. $36,-700.

★ **†Del., Wilmington**—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., 300 bed general surgical hospital. $2,000,000.

†D. C., Wash.—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Zone 25, 700 bed medical and surgical hospital.

†Fla., Bay Pines—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., 53 domiciliary beds for female beneficiaries.

†Fla., Miami—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., 300 bed medical and surgical hospital.

†Ill., Chicago—South Chicago Hospital, 2320 E. 93rd St., plans 2 story, nurses home, $109,374. **FWA.**

†Ill., Decatur—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D .C., 391 bed medical and surgical hospital.

†Ill., Downey—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., 174 bed N.P. Hospital addn.

†Ill., Marion—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., 319 bed medical and surgical hospital addn.

†Ky., Outwood—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., 100 bed addn. to T.B. Hospital (Clinical Bldg.).

†La., Alexandria—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., 250 bed addn. to T.B. Hospital.

†La., New Orleans—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., 510 bed medical and surgical hospital.

★ **†Mass., Lowell**—U. S. Eng., 31 St. James Ave., Boston, Zone 16, ordnance plant bldg. Approx. $700,000.

★ **†Mass., Northampton**—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., veterans hospital addns. for 246 neuropsychiatric patients with tuberculosis, $1,700,000.

†Mich., Dearborn—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., 300 bed T.B. Hospital.

†Mich., St. Clair Shores—School Dist. 1, Macomb Co., St. Clair Shores, 8 classroom addn. to South Lake High School, $131,300. **FWA.**

†Miss., Biloxi—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., 51 bed medical and surgical hospital addn., administration bldg. and non-duty barracks.

†Miss., Jackson—Mississippi Baptist Hospital, Jackson, 16 bedroom nurses home, $41,000. **FWA.**

Mo., Centralia—City Hospital Planning Com., A. B. Chance, chn., plans by Jamieson & Spearl, Arcade Bldg., 806 Olive St., St. Louis, Zone 1, 25 bed health center hospital and offices for doctors and dentists, on 7 acre site. $125,000-$150,000. Applied to FWA-CD 6/4—ENR 6/7.

†Mo., Ferguson (St. Louis 21, P. O.)—Ferguson School Dist., V. C. McClure, supt., Bd. Educ., 200 Church St., plans by Wm. B. Ittner, Inc., 911 Locust St., St. Louis, Zone 1, 2 story, 4-class room school addn. $60,000. **FWA.**

†Mo., Jefferson Barracks—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., 248 bed medical and surgical hospital addn.

PUBLIC BLDGS. (Proposed Work, Cont'd.)

†**N. Y., Batavia**—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., 295 bed (conversion) addn. to T.B. Hospital.

†**N. Y., Bath**—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., 100 domiciliary beds for female beneficiaries.

†**N. Y., Saratoga Springs**—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., 250 bed medical and surgical hospital.

†**O., Dayton**—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., 83 domiciliary beds for female beneficiaries.

†**Pa., Lebanon**—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., 1,000 bed N. P. Hospital addn.

Pa., Media—G. M. Ewing, archt., 1720 Real Estate Trust Bldg., Phila., completed plans and bids soon Juvenile Home addn., alterations, for Comrs. Delaware Co., Front and South Sts. $150,000. CD 2/8—ENR 2/15.

★†**Pa., Pittsburgh**—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., 1,200 bed general medical hospital on 13 acre site adjacent to University of Pittsburgh, $6,800,000.

†**Pa., Sharon**—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., neuropsychiatric hospital at Camp Reynolds, near here.

†**S. D., Sioux Falls**—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., 167 bed medical and surgical hospital addn.

†**Tenn., Lenoir City**—City, plans school. $32,500. **FWA.**

†**Tenn., Liberty Hill**—Town, replacing Liberty Hill School. $135,000. **FWA.**

†**Tenn., Memphis**—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., 148 bed medical and surgical hospital addn.

†**Tenn., Mountain Home**—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., 287 bed medical and surgical hospital addn.; 100 domiciliary beds for female beneficiaries.

Tex., Corpus Christi—Corpus Christi Ind. School Dist., plans by Brock & Anderson, Jones Bldg., school bldg. expansion, auditorium, cafeteria, etc. $150,000.

†**Tex., Fort Worth**—U. S. Eng., 231 W. Main St., Denison, relocating army bldgs., Ser. 34-066-45-62. $150,000.

★†**Tex., San Antonio**—U. S. Eng., Fort Sam Houston, conversion addnl. existing army bldgs. into 2,000-convalescent beds capacity, $1,000,000; conversion addnl. existing army bldgs. for personnel distr. occupancy, $250,000; mechanical shop unit (Air Service), $300,000.

Utah, Ogden—Weber Co. Bd. Educ., Ogden, plans by L. S. Hodgson, Eccles Bldg., 4 classroom, auditorium and office addn., Hopkins School, West Ogden.

†**Utah, Salt Lake City**—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., 62 bed medical and surgical hospital addn.

★†**Va., Camp Pickett (br. Blackstone)**—U. S. Eng., 1 and Douglas Sts. N.W., Wash. 25, D. C., recreational bldgs., heated swimming pool housed in brick bldg., 20 bowling alleys, and restoring certain hospital bldgs. $2,000,000.

★†**Wash., Bremerton** — Pub. Housing Auth., NHA, Skinner Bldg., 5 and Union Sts., Seattle, Zone 1, plans by Naramore, Bain, Brady & Johanson, Smith Tower, 2 Ave. and Yesler Way, Seattle, Zone 4, 308 frame housing units in Sinclair Park, Wash. 45332, $616,000; 616 frame housing units in East Bremerton, Wash. 45337, $1,232,000, both with central heating plants; 280 frame housing units, Marion St., Wash. 45336, $560,000. CD 7/13—ENR 7/21.

★†**Wash., Bremerton**—Pub. Housing Auth., NHA, Skinner Bldg., 5 and Union Sts., Seattle, Zone 1, plans by Naramore, Bain, Brady & Johanson, Smith Tower, 2 Ave. and Yesler Way, Seattle, Zone 4, 1424 dorimitory units, Wash. 45331 and 1200 family dwelling units. $3,700,000. CD 5/21—ENR 5/24.

†**Wash., Kennewick**—Pub. Bldgs. Admin., 18 and F Sts. N.W., Wash. 25, D. C., rejected bids Apr. 24, 1 story, 242x430 ft., frame hospital, Wash. 45-299-N. $350,000. **FWA.** CD 4/26—ENR 5/3, under LB.

★**Wash., Seattle**—City Light, E. R. Hoffman, supt., City Light Bldg., 3 and Madison Sts., Zone 1, 4 substations, an overhead line extens. $330,000; replacing wooden pipeline at Cedar River generating plant, $350,000.

†**Wash., Walla Walla**—St. Mary's Hospital, Walla Walla, plans by E. G. Morgan, 1st National Bank Bldg., remodeling fifth floor, constructing overhead passage from hospital to nurses home, installing boiler and electrical facilities. $60,000. **FWA.**

†**Wash., Walla Walla**——Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., tuberculosis infirmary bldg., nurses quarters and closed corridor sys. at veterans hospital.

†**Wis., Waukesha**—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., warehouse and occupational shops. Proj. 2326 and 2529.

Alta., Crows Nest Pass—Town, plans by Meech & Meech, Lethbridge, Municipal Hospital 40. $185,000.

B. C., Cloverdale—Surrey Municipal School Bd., Cloverdale, school. $152,000.

B. C., Cranbrook—City, sketches made civic centre. About $150,000.

★**B. C., Essondale**—Dpt. P. Wks., Victoria, hospital exten. $800,000.

B. C., Nelson—Municipality, W. A. Gordon, city clk., City Hall, butane air gas plant, replacing coal gas plant.

Man., Winnipeg—Municipality, concrete plant. $96,000 voted. W. D. Hurst, City Hall, engr.

N. B., Port Elgin—Regional Districts of Eastern Westmoreland Co., Port Elgin, plans by M. F. Steeves, Fredericton, regional high school. About $150,000. CD 1/12—ENR 1/18.

N. B., Fredericton—Provincial Govt., Fredricton, plans by District Const. Supt., 144 Union St., St. John, 60 houses, throughout New Brunswick. $250,000.

N. B., Saint John—City, City Hall, plans prepared by J. K. Gillies, Saint John, powerhouse at Tuberculosis Hospital, $70,000.

N. B., Saint John—Bd. School Trustees, Saint John, plans by W. W. Alward & J. J. Gilbies, St. John, 2 story, Z-shaped bldg. $175,000.

Newfoundland, Port St. George—Government of Newfoundland, St. Johns, diamond drilling of salt and potash formations. $50,000.

N. S., Halifax—Municipality plans by C. A. Fowler & Co., Capitol Bldg., repair shop, garage, etc. $190,000. R. M. McKinnon, City Hall, engr. CD 6/1.

Ont., Chatham—Chatham Public Utilities Comn., R. Reynolds, secy., 1 story, brick, concrete hydro sub-station, $65,000.

Ont., Clinton—Town, King St., plans by L. G. Bridgman, Royal Bank Bldg., London, 40-bed, brick, rein.-con. General Hospital addn. About $150,000.

Ont., Fort Erie—Wartime Housing, Ltd., 55 York St., Toronto, altering women's wartime residence for use as rehabilitation home for returned soldiers. $250,000.

★**Ont., Hamilton**—Wartime Housing Ltd., 55 York St., Toronto, 200 semi-cement, semi-permanent type frame houses. $9,000,000.

Ont., North Bay—Dominion Govt., Ottawa, military hospital. $350,000. Dpt. Veterans Affairs, Daly Bldg., Ottawa, engr.

★**Ont., Ottawa**—Wartime Housing, Ltd., 55 York St., 200 houses for veterans, Carling Ave. area. About $1,000,000.

Ont., Peterboro—Wartime Housing Ltd., 55 York St., Toronto, 75 semi-permanent type houses, $275,000.

Ont., Peterboro—Wartime Housing Ltd., 55 York St., 100 houses for returned men and their families. $450,000.

Ont., Port Arthur—Wartime Housing Ltd., 55 York St., Toronto, 50 houses. $225,000.

Ont., Toronto—Municipality, imprv. municipal abattoir, $69,955.

★**Que., Amos**—Province of Quebec, Quebec City, sanitorium, $500,000. Ministry of Health & Social Welfare, Quebec City, engr.

Que., Hull—Dpt. Veterans Affairs, Veteran's Land Act, Ottawa, Ont., G. Murchison, dir., 40 houses for veterans. $180,000.

Que., Joliette—Joliette School Comn., Joliet, plans by A. Gravel, 513 Rachel St. E., Montreal, school and residence. $250,000.

Que., Lac Edouard—Province of Quebec, Quebec City, enlarging Lake Edward Sanitorium. $250,000. Ministry of Health & Social Welfare, Quebec City, engr.

Que., Ville La Salle (Postal Dist. Montreal)—Catholic School Com., c/o A. Gravel, 62-4 Ave., Ville La Salle, school addn. $150,000.

Sask., Regina—Province of Saskatchewan, Regina, boot and shoe factory, $50,000. Dpt. Natural Resources & Industrial Development, Regina, engrs.

BIDS ASKED

Bids Asked June 25

★†**N. Y., West Point**—U. S. Eng., 120 Wall St., New York, Zone 5, field artillery training bldg., Signal Detachment Material and Training Bldg. $886,000. CD 6/4—ENR 6/7.

Bids Asked June 26

†**Mass., Camp Edwards**—U. S. Eng., 31 St. James Ave., Boston, Zone 16, 16 bldg. addns., alterations, and sprinkler sys. and utilities for 4 bldgs., constructing 2 bldgs., Contr. 19-023-Neg-157.

Bids Asked June 27

Ont., Hamilton—L. T. Spalding, c/o Bd. Educ., City Hall, 2 story, 80 x 203 ft., brick, hollow tile, structural steel frame school, rein.-con. fdns., Parkdale Ave. W. W. B. Riddell, 25 Hughson St. S., archt.

Bids Asked June 28

†**Ga., Forrest Park**—Clayton Co. Consolidated School Dist., Forest Park, 3 schools. $65,000. **FWA.** R. R. Nash, Marietta, archts. CD 5/2—ENR 5/10.

Me., Pownal—State, Dpt. Institutional Services, State House, Augusta, 3 story, bsmnt., 60 x 120 ft., concrete, brick, employee's bldg., State School. Approx. $150,000. Plans deposit $25. A. J. Harriman, 88 Shepley St., Auburn, archt.

Bids Asked June 29

†**Ga., Toccoa**—City Mgr., City Hall, school. **FWA.** Francis M. Daves & Assoc., 774 Spring St. N.W., Atlanta, archts. CD 5/2—ENR 5/10.

Bids Asked About July 1

†**Mo., Ferguson**—School Dist. of Moline, M. Thomas, supt., Chambers Rd. and Mayfair Dr., St. Louis Co., 2 story, brick 4-room school addn., at Chambers Rd. and Mayfair Dr. $67,000. **FWA.** M. A. Abbitt & E. J. Mackey, 315 N. 7 St., St. Louis, Zone 1, assoc. archts. CD 6/4—ENR 6/7.

Bids Asked July 2

†**Calif., San Diego**—Pub. Bldgs. Admin., 18 and F Sts. N.W., Wash. 25, D. C., Crown Point School, Calif., 4-650-2. **FWA.** S. W. Hamill, 1123 Bank of America Bldg., archts. CD 5/29—ENR 6/7.

La., Iota—Acadia Parish School Bd., Crowley, rebuilding Iota High School. Plans deposit $25. C. Erroll Barron, 512 Guaranty Bldg., Alexandria, archt.

Bids Asked July 4

Sask., Saskatoon—Secy. Dpt. P. Wks., Ottawa, Ont., constructing National Research Laboratory, University of Saskatchewan. Plans deposit $50. C. D. Sutherland, c/o owner, archt.

Bids Asked July 5

Me., Presque Isle—University of Maine, Dr. F. Griffee, dir., Maine Agricultural Experiment Station, Orono, potato storage and shipping plant. Plans deposit $10. Crowell & Lancaster, 6 State St., Bangor, archts.

Bids Asked July 9

Ind., Columbia City—Bd. P. Wks., J. A. Brown, mayor, City Hall, 1 story, bsmnt., brick, rein.-con., structural steel municipal light and power plant addns., imprvs., incl. generator unit, condenser, spray tower, turbo-generator, piping. Plans deposit $10. Laramore & Douglas, 327 S. LaSalle St., Chicago, Ill., consult. engrs.

Bids Asked About September 1

★**Calif., Los Angeles**—City Dpt. Water & Power, 207 S. Bway., (1) fdn. and auxiliary bldgs., (2) steel frame, (3) concrete work for steam-electric generating plant, Fries Ave. and B St., in Wilmington. $6,500,000. S. B. Morris, 207 S. Bway., engr. CD 1/31—ENR 2/22, under Postwar Projects.

Bids Asked

†**D. C., Bellevue**—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W.,

PUBLIC BLDGS. (Bids Asked, Cont'd.)

Wash. 25, D. C., laboratory bldg. at Naval Research Laboratories, NOY 12110.

LOW BIDDERS

†**Calif., Hunters Point**—Pub. Housing Auth., NHA, 760 Market St., San Francisco, 205 portable dwelling units, Calif. 4158, from Moore & Roberts, 693 Mission St., San Francisco, **$405,452.** F. L. Langhorst, 447 Sutter St., and W. H. Knowles, 369 Pine St., San Francisco, archts.

†**N. C., Fayetteville** — Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., June 12, Main Bldg. 1, addn., grading, drainage, etc., No. 2482, from J. D. Hedin Constr. Co., 820 Michigan Ave. N.E., Wash., D. C., **$386,000.** CD 4/27—ENR 5/3.

†**O., Columbus**—U. S. Eng., 522 Federal Bldg., Cincinnati, power plant addns., general alterations, at Army Service Forces Depot, from Huffman-Wolfe Co., 669 N. High St., **$113,387.**

†**Wash., Longview**—School Dist., Longview, June 8, 1 story, frame, masonry school, Wash. 45232-N, from Quoidbach Constr. Co., 1709 Kessler Blvd., **$153,225. FWA.** CD 5/29.

†**Wash., Poulsbo**—Pub. Housing Auth., NHA, Skinner Bldg., 5 and Union Sts., Seattle, Zone 1, June 8, 160 family dwelling units, Wash. 45325, from Brady Constr. Co., 707 Spokane St., Seattle, Zone 8, **$433,700.** CD 5/10—ENR 5/17.

Wis., Clintonville—City, S. J. Tilleson, clk., City Hall, June 9, general contract 2 story, bsmnt., 110 x 137 ft., T-shaped hospital, from Hutter Constr. Co., Fond du Lac, **$199,524.** CD 5/23—ENR 5/31.

CONTRACTS AWARDED

★†**D. C., Wash.**—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash. 25, D. C., Office Bldg. 19, NOY 10419, to J. D. Hedin Constr. Co., 820 Michigan Ave. N.W., **$805,800.** Bids 6/4, awarded 6/7. CD 6/6, under LB.

Ga., Jefferson—Bd. Educ., school, to A. J. Collins, Red Rock Bldg., Atlanta, **$209,218.** Frances M. Daves & Assoc., 774 Spring St. N.W., Atlanta, archts.

Ga., Thomaston—School Bd., Thomaston, 17 classroom school, to A. Farnell Blair, Decatur, **$159,913.** CD 5/25—ENR 5/31.

★†**Ind., Charleston**—Pub. Housing Auth., NHA, 201 N. Wells St., Chicago, Ill., 425 addnl. housing units, to W. J. Lazynski, Inc., 906 E. Center St., Milwaukee 12, Wis., **$516,000.**

†**Mass., Camp Myles Standish**—U. S. Eng., 31 St. James Ave., Boston, Zone 16, addnl. bldgs., Contr. 19-023-45-Neg-144, to Frankini Constr. Co., 30 Mystic Ave., Medford, **$39,492.** CD 6/7.

★†**Mass., Lowell**—U. S. Eng., 31 St. James Ave., Boston, Zone 16, ordnance plant bldg., Contr. 2-19-023-eng-864, to J. F. Fitzgerald Constr. Co., 214 Essex St., Boston, approx. **$700,000.** Rewelec Mfg. Co., Lowell, will operate. Charles T. Main, Inc., 201 Devonshire St., Boston, engr. and archt.

★†**N. Y., Scotia**—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash. 25, D. C., 5 storehouses, NOY 12063, to William L. Crow Constr. Co., 101 Park Ave., New York 17, N. Y., **$1,947,500.** Bids 6/4. CD 6/7, under LB.

†**N. C., Camp Davis**—U. S. Eng., Post Office Bldg., Savannah, Ga., consolidated mess hall, CDA-10-45, to Coe-Stinson Constr. Co., Box 1881, Charlotte, **$167,987.** Bids 6/1. CD 6/6.

Tex., Lubbock—City, O. W. Ribble, mayor, power plant, to J. T. Glover, Lubbock, **$71,434.** Est. $40,000 C.D 6/5—ENR 6/7.

COMMERCIAL BUILDINGS

PROPOSED WORK

Conn., New Haven—S. Skolnick, 152 Temple St., 40 unit frame housing, incl. streets, Westville Sect. Valley, Strong, Mountain View Rd. and Victory Dr. sect. **$200,000.**

Conn., New London — V. Castaldi, c/o Schoifield & Lindsay, archts., 309 State St., 4 story, 90x125 ft., apartment and stores, Broad and Channing Sts. **$150,000.**

La., Istrouma (br. Baton Rouge)—St. Gerard Majela Catholic Church, Rev. P. J. Bandry, pastor, Baton Rouge, soon lets contract 3 story, brick, masonry, steel parochial school. Dibolls-Kessels, Baronne Bldg., New Orleans, archt.

La., New Orleans — Roosevelt Hotel, 123 Baronne St., building changes, duct work, Roosevelt Hotel. $350,000. L. S. Weil & B. Moses, Audubon Bldg., engrs.

Me., Biddeford—M & P Theatres, G. F. Friary, mgr., Biddeford, soon lets contract 2½ story, bsmnt., 70x100 ft., concrete, brick theatre, Alfred and Beacon Sts. $150,000. Krokyn & Browne, 120 Milk St., Boston, Mass., archts.

Tex., Houston—Garden Oaks Methodist Church Congr., c/o P. W. Quillian, 822 Rosslyn Rd., sketches by H. C. Moore, 2008 W. Alabama St., 1 and 2 story church, incl. air conditioning, sanctuary to seat 600, 1 story educational bldg., social hall brick, rein.-con. $150,000.

Va., Arlington—Wenner & Fink, archts., Wesley Bldg., Phila., Pa., soon lets church and Sunday School, for Arlington Methodist Church, 2617 Columbia Pike. $150,000. CD 2/6—ENR 2/8.

B. C., Westview—Gordon's Finance Reg'd, Westview, 130 dwellings, $450,000.

Man., Winnipeg—Medical Arts Bldg., Ltd., Graham and Kennedy Sts., plans by Northwood & Chivers, 406 Nanton Bldg., office bldg., Graham and Kennedy Sts. $320,000.

Man., Winnipeg—St. Paul's College, 7 Vaughn St., plans by A. E. Cubbidge, 404 Montreal Trust Bldg., college exten. $150,000.

N. B., Moncton—J. Butler, c/o Kaplan & Sprachman, archts., 305 Dundas St. W., Toronto, Ont., theatre. $235,000.

N. B., Moncton—Sisters of Providence, Moncton, plans completed by R. A. Frechette, 30 Bonaccord St., nurses home, Providence St. About $150,000.

N. B., Sackville—Mount Allison University Regents, Sackville, men's residence. $150,000.

N. B., St. Joseph—Rev. Sisters of Sacred Heart, St. Joseph, plans by R. A. Fecket, 30 Bonaccord St., Moncton, Mother House. $250,000.

N. S., New Waterford—Walker, Gregor & Guthro, New Waterford, and c/o Kaplan & Sprachman, archts., 305 Dundas St. W., Toronto, Ont., making plans theatre. $180,000.

N. S., Sheet Harbour—Soldiers Memorial Hospital Br., c/o H. Newcombe, Murphy's Cove, hospital. $150,000.

N. S., Sydney—D. P. MacDonald, c/o Kaplan & Sprachman, archts., 305 Dundas St. W., Toronto, Ont., theatre, $225,000.

Ont., Campbellford—Campbellford Memorial Hospital Bd., c/o H. M. Fowlds, Campbellford, hospital. $100,000.

Ont., Drummondville—Protestant School Bd., Drummondville, high school. $250,000.

Ont., Gananoque—Memorial Hospital Bd., c/o E. C. Wright, Gananoque, hospital. $150,000.

Ont., Guelph—Branch No. 234, Canadian Legion, R. H. Fell, pres., 247 Woolwich St., reconstructing Legion Hall. About $150,000. A. G. Garner. 335 Douglas St., Stratford,

Ont., Kingston — East Central Counties Tuberculosis Assn., c/o Councillor L. B. Cronk, Hinchbrooke, tuberculosis hospital on site between Lake Ontario Park and Ontario Hospital. $350,000.

Ont., Kingston—Hotel Dieu Bd. Governors, W. Casey, pres., sketches by Drever & Smith, 81 Brock St., hospital wing. $275,000. CD 3/9.

Ont., London — London Separate School Bd., Rev. J. A. Feeney, 435 Colborne St., sketches made by W. G. Murray, 984 Richmond St., Junior High School. $300,000.

Ont., Midland—Elim Homes, Midland, homes for needy, infirm or elderly people. $150,000.

Ont., Milverton—The Evangelical Lutheran Synod of Canada, c/o Rev. J. H. Hamester. Pembroke, Lutheran Old Peoples Home, $150,000.

Ont., Ottawa—H. Berlin, Rideau St., plans by Kaplan & Sprachman, 305 W. Dundas St., Toronto, theatre. $150,000.

Ont., Peterboro—Sisters of St. Joseph, J. R. Cockery, chn., Peterboro, sketches made by E. J. Turcotte, 1010 St. Catherine St. W., Montreal, Que., nurses home. $230,000.

★**Ont., St. Thomas**—Grand Central Hotel, St. Thomas, plans by V. J. Blackwell, 284 Dundas St., London, rebuilding rear sect. hotel. $550,000.

★**Ont., St. Thomas**—C. Hunter & J. Hunter, 332 Talbot St., reconstructing fire-destroyed wing of Grand Central Hotel, 332 Talbot St., about $550,000.

★**Ont., Toronto**—Hospital for Sick Children, University Ave., plans by Architect, c/o N. C. Urquhart, 18 Thornwood Rd. bldgs. $6,000,000 incl. cost site, equip. CD 4/18—ENR 4/26.

Ont., Toronto—Pentecostal Assemblies of Canada, 362 Danforth Ave., D. N. Bantam, office bldg., Danforth Ave. near Greenwood Ave. $200,000. engr.

P.E.I., Summerside—H. E. Gaudett, Summerside, plans by Kaplan & Sprachman, 305 Dundas St. W., Toronto, Ont., theatre, $160,000.

Que., Montreal—Odeon Theatres of Canada Ltd., 1900 Royal Bank Bldg., Toronto, Ont., plans by J. I. English, 2 E. King St., Toronto, Ont., theatre. $200,000.

Que., Montreal—Versailles Estate, 60 W. St. James St., plans by M. Cinq Mars, 60 W. St. James St., apartment, $150,000.

Que., Quebec City—Archdiocese of Quebec, Archbishop's Palace, Quebec City, Upper Seminary, $300,000.

Que., Quebec City—Archdiocese of Quebec, Quebec City, church, First Ave. $150,000.

Que., Rouyn—Rev. Clercs de St. Viateur, 1145 St. Viateur St. W., Montreal, classic college. About $175,000.

Que., Shawinigan Falls—Shawinigan Falls Catholic School Comn., J. O. S. Brunet, secy., plans by A. Lacoursiere, 101 4 St., girls school, Christ the King Parish. Over $150,000.

Que., Stanstead — Stanstead Protestant School Bd., L. E. Carpenter, secy., school, $175,000.

BIDS ASKED

Tex., Houston — Wilkin, Parker Lumber Co., 801 Rosine St., 26 asbestos siding bungalows. $200,000. CD 6/6—ENR 6/14.

LOW BIDDERS

Calif., San Francisco—Pacific Telephone & Telegraph Co., 140 New Montgomery St., June 8, 2 story, bsmnt., structural steel, 100x100 ft. Montrose Exchange telephone bldg., from Parker, Steffens & Pearce, 135 S. Park St., Est. **$400,000.** H. A. Thomsen, Jr., 315 Montgomery St., archts. CD 5/25—ENR 5/31.

CONTRACTS AWARDED

Ala., Tuscaloosa—J. Warren Leach, 68 Woodley Rd., Montgomery, 50 houses, to Walter Dean Contg. Co., 2031 1 Ave. N., Birmingham. Est. **$250,000.** Miller, Martin & Lewis, 910 Title Guarantee Bldg., Birmingham, archts. CD 4/26—ENR 5/3.

California—Scoble Co., 343 14 Ave., San Francisco, 32 residences in Capuchino Manor subdivision, San Mateo Co. Owner builds. **$160,000.**

Me., Houlton—Ricker Classical Institute, High St., 3 story, 65x145 ft., arts and sciences bldg., incl. library and laboratory. Wording Hall, to Simonds Constr. Co., Inc., 12 Monument St., Portland. Est. **$150,000.** Bids 5/29. CD 5/17—ENR 5/24.

Mass., Adams—J. A. Ouellette, Melrose St., Adams, residential development. Owner builds. To exceed **$250,000.**

Mass., Holyoke—C. Gagne, 2 Forest St., Willimansett, 52 frame residences, East St. Owner builds. To exceed **$200,000.** D. P. Baribault, 166 Buckingham St., Springfield, archt.

Mass., Springfield—Freebow Estate, Inc., Chestnut and Winter Sts., brick, frame residential development, Burnside Terrace. Owner builds. **$180,000.** E. P. Dorgan, 535 Chestnut St., archt.

Mass., Wollaston—Eastern Nazarene College, 23 E. Elm Ave., 4 story, brick, steel, Munro Hall addn., alterations, to Johnson Hamre & Son, 55 Buckingham Rd., Quincy. Est. over **$150,000.** Henry & Richmond, 552 Boylston St., Boston, archts.

Pa., Franklin—V. A. Rigamount, archt., 5471 Coral St., Pittsburgh, general contract, 2 story, bsmnt., 40 x 300 ft., terra cotta, brick, theatre for Kayton Entertainment Co., Franklin, to H. T. Osburn Co., Franklin. Est. over **$150,000.** CD 5/7—ENR 5/10.

Pa., Mt. Lebanon (br. Pittsburgh)—W. C. Norris, 308 Castle Shannon Rd., 16 two story, bsmnt., 22x28 ft., brick veneer residences, Fruithurst Rd., separate contracts. **$150,000.**

Pa., New Kensington—N. Debay, 1500 Victoria Ave., 19 two story, bsmnt., 24x26 ft.,

OMMERCIAL BLDGS. (Contracts Awarded, Cont'd.)

rick veneer residences, Glenwood and aurel Rds. separate contracts. **$150,000.**

Pa., Pittsburgh—John Hack (Builder), 021 Jacob St., 18 two story, bsmnt., 22x28 brick veneer residences, Green Crest r. and Bellaire Dr., separate contracts. 150,000.

Pa., Swissvale—H. E. Graham, 140 Spring rove Rd., Pittsburgh 21, 16 two story, smnt., 22x28 ft. residences, Church St., separate contracts. **$150,000.**

Pa., Wilmore—Berwind-White Coal Min- ing Co., A. R. Shannon, purch. agt., Com- ercial Trust Bldg., Phila., thirty 2 story, 4 x 28 ft., frame, concrete housing units to urham & Irvine, 1713 Rittenhouse Sq., hila. Est. **$1,500,000.** W. K. Durham, 1713 ittenhouse Sq., Phila., archt. A. Muir, ommercial Trust Bldg., Phila., company n. engr.

INDUSTRIAL BUILDINGS

PROPOSED WORK

Ala., Huntsville—FACTORY—John Blue o., Laurinburg, S. C., factory, $60,000.

Calif., El Centro—BUS TERMINAL—Paci- ic Greyhound Lines, Pine and Battery Sts., an Francisco, remodeling bus terminal, 75,000.

Calif., Fresno—BUS TERMINAL—Pacific reyhound Lines, Pine and Battery Sts., an Francisco, remodeling bus terminal, $95,- 00.

Calif., Los Angeles—CHICKEN HATCH- RY, etc.—Runnymeade Farms, 7914 Reseda ve., Reseda Dist., Los Angeles, chicken atchery and brooding plant, $200,000.

Calif., Modesto—FACTORY—G. N. Hilburn, rcht., 1211 K St., soon lets contract, 60 x 120 t., rein.-con., steel frame factory, for F. J. udson, c/o architect. Over $40,000.

Calif., Sacramento — BUS TERMINAL — acific Greyhound Lines, Pine and Battery ts., San Francisco, modern bus terminal, 250,000.

Calif., Salinas—SHOP—Pacific Greyhound ines, Pine and Battery Sts., San Francisco, emodeling shop. $55,000.

Calif., San Carlos—PLANT—Welding Serv- es Sales, 605 Old County Rd., rebuilding ar production plant. $75,000.

Calif., San Francisco — PLANT — Golden est Plating Works, A. D. LaMar, 60 uniper St., rebuilding 3 story plant. Over 0,000.

Calif., San Jose—BUS TERMINAL—Pacific reyhound Lines, Pine and Battery Sts., an Francisco, reconstructing bus terminal, 0,000.

Calif., Williams — WAREHOUSE, etc. — armers Warehouse, C. J. Schaad and B. Fouch, owner, Williams, rebuilding 150x 2 ft. warehouse, and 65x165 ft. grain drier dg. $200,000.

Colo., Rangeley—OIL PUMPING STA- IONS—Utah Oil Refining Co., Rangeley, crude oil pump. stations. $375,000.

Conn., Hartford—PLANT—Aetna Oil urner Co. Inc., 2074 Park St., plans by lades Electric Cooperative, Inc., Moore ory, 100 x 130 ft., brick, cinder block ameling unit plant addn., Rowe Ave.

Conn., New Haven—SHOWROOM, etc.— eneral Motors Corp., State St., brick, steel, oncrete showroom and service, Fulton and aura Sts. $55,000.

Conn., Waterbury—DAIRY PLANT—Bock- all Dairy, Inc., 34 Englewood Ave., plans eing completed by A. J. Braman, Maple- ood, N. J., 1 story, 170x180 ft., dairy lant, incl. pasteurizing and bottling plant, oiler room and offices, E. Aurora St. $75,- 00. J. Feld, 103 Park Ave., New York, Y., engr.

Conn., Wethersfield—TRUCK GARAGE— . Kapla, 8 Gilman St., Hartford, 1 story, 5 x 125 ft., brick, steel, cinder block truck arage, Silas Deane Hy. $40,000.

Fla., Jacksonville—PLANT—Florida Glass fg. Co., P. J. D. Larmoyeux, mgr., Huron t., plant addns. $110,000.

Fla., Moore Haven—POWER PLANT— lades Electric Cooperative, Inc., Moore aven, generating facilities, power plant, 259,300.

Ill., Chicago—FREIGHT DEPOT—Chicago, lwaukee, St. Paul & Pacific R.R., W. H. enfield, ch. engr., Union Station, Zone 6, lans by A. O. Lagerstrom, Union Station, 1 story, 50x300 ft. freight depot, Jefferson St. near Fulton St. To exceed $150,000.

★**Kan., Liberal**—PLANT—Northern Natu- ral Gas Co., Liberal, natural gas dehy- dration and recovery plant. $1,250,000.

Ky., Lexington—PLANT—Kawneer Co., Niles, Mich., household and auto-finishing products plant. $100,000.

★**La., Shreveport**—POWER GENERATING STATION—Southwestern Gas & Electric Co., 428 Travis St., electric power generating station. $3,000,000.

Me., Brunswick—SERVICE—A. Bissbee, Pleasant St., bids soon 1 story, 45 x 105 ft., 30 x 75 ft., brick, steel, concrete automobile service, Pleasant St. $40,000. Miller & Beal, Inc., 465 Congress St., Portland, archts.

Mich., Monroe — PLANT — Monroe Auto Equip. Co., B. D. McIntyre, pres., Monroe, plant addn. $125,000.

Mo., St. Louis—PLANT—Continental Oil Co., 1525 Sublette Ave., Zone 10, bulk oil plant and administration bldg., on site, north side of Manchester Ave., west of Kings High- way. $100,000.

Nev., Reno — BUS TERMINAL — Pacific Greyhound Lines, Pine and Battery Sts., San Francisco, Calif., bus terminal. $150,000.

N. H. Claremont—PLANT—L. O'Brien, Daily Eagle, 19 Sullivan St., plans by Alfred T. Granger Assoc., Main St., 1 story, 40 x 90 ft., printing plant and radio station addn., Sullivan St. $40,000 incl. equip.

N. C., Charlotte—PLANT—Arnold Hoff- man & Co., Charlotte, soon lets contract 1 and 2 story, 75x200 ft. plant unit and alterations. Jenks & Ballou, 2600 Industrial Trust Bldg., Providence, R. I., engrs.

O., Akron—WAREHOUSE, etc.—Akron Chemical Co., 1025 Sweitzer Ave., warehouse, plant office, Mason and Fountain Sts., with frontage on Belt Line Ry. $100,000 or more.

O., Akron—PLANT—Killian Mfg. Co., 355 Morgan Ave., plant alterations, addn. $178,- 500.

O., Defiance—PLANT—Defiance Metal Products Co., M. Zachrich, genl. mgr., Defiance, 64 x 114 ft., plant addn., incl. inside loading dock with crane. $40,000.

O., Niles—PLANT—Republic Steel Corp., Republic Bldg., Cleveland, expanding plant, incl. annealing furnace, addnl. equip. and exten. bldgs. $300,000.

★**O., Sandusky**—PLANT—Apex Electrical Mfg. Co., C. G. Frantz, pres., reconvert- ing, enlarging, imprv. plant. $750,000.

O., Toledo—SMELTER, etc.—Toledo Smelting & Refining Co., A. F. Sutts, genl. mgr., 1011 Avondale St., smelter and refinery for processing non-ferrous metals on site near Maumee River. $50,000-$75,000.

Ore., Portland—GARAGE—Portland Trac- tion Co., 2838 E. Burnside St., garage. $225,- 000.

Ore., The Dalles—LUMBER YARD BLDG. —F. G. Mauser, Dilley, 120 x 200 ft. lumber yard bldg. $50,000.

Pa., Butler—FEED PLANT—General Mills, Inc., Farms Service Div., F. W. Vosloh, in charge, 312 E Cunningham St., soon lets contract 1 story, part bsmnt., 96x165 ft., concrete block, steel frame, feed plant, etc., incl. 4 steel grain bins, holding 2 carloads, 6 steel grain bins holding 1 carload grain. $60,000.

Pa., Pottsville—WAREHOUSE—Phila. & Reading Coal & Iron Co., Reading Terminal, Phila., warehouse, E. Norwegian and Coal Sts. $40,000. Dohn Provision Co., lessee.

S. C., Columbia — FAN ROOM — Pacific Mills, Hampton Div., Heyward St., soon lets contract fan room bldg. Lockwood Greene Engrg., Inc., 920 Montgomery Bldg., Spartanburg, engrs.

S. C., Eastover — REFRIGERATION LOCKER PLANT, etc.—Lafaye, Lafaye & Fair, archts., 1226 Sumter St., Columbia, soon let contract refrigeration locker plant and abattoir, for Lower Richland Co. Farms Cooperative Assn., R. M. McGregor, pres., Eastover.

Tex., Houston—SHOP—Rouse Exploration Drilling Co., 3511 Milam St., 1 story, 50x160 ft., steel, concrete shop, etc. $40,000.

Tex., San Antonio—WAREHOUSE—A. S. Rosenberg, 608 Am. Hos. & Life Ins. Bldg., warehouse. $40,000. F. T. Drought, 503 Frost Bldg., engr.

Wash., Seattle—TRUCK MAINTENANCE —Wm. O. McKay Co., 609 Westlake Ave. N., truck maintenance bldg., 2 Ave. and Mercer St. $75,000.

Wash., Seattle — WAREHOUSE — Nara- more, Bain, Brady & Johanson, archts., Smith Tower, 2 Ave. and Yesler Way, Zone 4, soon let contract 140x460 ft., structural steel distributing warehouse, with corrugated steel roofing and siding, 3618 E. Marginal Way, for A. M. Castle & Co., 2600 W. Spo- kane St., Zone 6. $180,000. CD 3/5—ENR 3/8.

★**W. Va., South Charleston**—LABORA- TORY—Union Carbide & Carbon Co., 30 E. 42 St., New York 17, N. Y., research laboratory, $800,000.

★**Wis., Genoa**—POWER PLANT—Dairy- land Power Coop., Genoa, power plant, REA proj. Wis. 64-La Crosse. $500,000. Wis. Elec. Co-op., 303 E. Wilson St., Madi- son, Zone 3, engr. CD 6/14.

Wis., Green Bay — WAREHOUSE, etc. — Cities Service Oil Co., 919 N. Michigan Ave., Chicago, Ill., warehouse, office bldgs., 9 bulk storage tanks, 4 gasoline tanks.

Wis., Racine — FACTORY — Twin Disc Clutch Co., 1328 Racine St., plans by F. J. Hoffman, 201 6 St., brick, steel, concrete factory addn., concrete fdn.

Wyo., Granger—OIL PUMPING STATION —Utah Oil Refining Co., Wamsutter, crude oil pump. sta. $80,000.

Wyo., Wamsutter—OIL PUMPING STA- TION—Utah Oil Refining Co., Wamsutter, crude oil pump. sta. $100,000.

Alta., Edmonton — FACTORY — Norwood Lumber Co., Edmonton, factory. $40,000.

B. C., Burnaby—PLANT—Kelly Douglas & Co. Ltd., 367 Water St., Vancouver, food mfg. plant. $400,000.

B. C., Kamloops—PLANT—J. Cripps, Wil- liams Lake, plans by H. Cullerne, 325 Howe St., Vancouver, cold storage lock plant, Vic- toria St. About $45,000.

B. C., Kelowna—PLANT—Okanagan Fruit Juices, Ltd., Kelowna, plant. $50,000.

B. C., Lake Cowichan—PLANT—Lake Logging & Lumber Ltd., 675 Howe St., Van- couver, plant. About $42,500.

B. C., Ponce Coupe—ELECTRIC PLANT— Walter Schlosser & Associates, Estevan, Sask., electric plant imprvs. $40,000.

B. C., Porpoise Harbour (Postal Dist. Prince Rupert) — MILL — Billimor Spruce Mills, Ltd., Porpoise Harbour, mill. $75,000.

B. C., Quesnel—PLANT—Northern Dairy Products Ltd., Quesnel, dairy products plant. **$40,000.**

B. C., Vancouver — PLANT — **Fletcher's** Ltd., 1822 Kingsway St., plant. About $69,200.

B. C., Vancouver—LABORATORY—Elec- tronics Laboratories of Canada, Ltd., Capi- tol Hill, plans by C. B. Van Norman, 475 Howe St., research laboratory. Over $50,000.

Man., Brandon—PLANT—Anglo-Canadian Oils, Ltd., 18 and Birchmond Sts., plant addn. $74,000.

Man., Herb Lake—SHAFT SINKING—Nor- Acme Mines, Ltd., 603 Standard Bldg., Sas- katoon, Sask., shaft sinking, mill with capacity 2,000 tons daily, etc. $150,000.

Man., Winnipeg—PLANT—North Star Cold Storage Co., Ltd., 128 Adelaide St., plant addn. $70,000.

Man., Winnipegasis—ELECTRIC PLANT— W. Schlosser & Associates, Estevan, Sask., imprv. electric plant, $40,000.

N. B., Newcastle—PLANT—Fraser Com- panies, Ltd., Edmundston, plant. About **$64,200.**

N. B., Sackville—PLANT—Enamel & Heating Products, Ltd., Sackville, plant, Main St. About $57,300.

N. B., Woodstock — DAIRY — General Dairies, Ltd., Fredericton, dairy, $49,300.

N.W.T., Yellowknife—DIAMOND DRILL- ING—Transterra Mines, Ltd., Yellowknife, diamond drilling, $55,000. J. M. Cohen, c/o owner, engr.

N. S., Amherst—FACTORY—Fundy Mfg Co. Ltd., Amherst, toy, etc. factory. $40,000.

N. S., Hantsport—FACTORY—Hantsport Fruit Basket Co. Ltd., Hantsport, box fac- tory. **$40,000.**

N. S., Pictou—PLANT—Community De- velopment Bd., Pictou, cold storage plant. $100,000.

Ont., Brantford—PLANT—Brantford Metal Products Ltd., Brantford, sheet metal prod- ucts plant. $40,000.

INDUSTRIAL BLDGS. (Proposed Work, Cont'd.)

Ont., Central Patricia (Oshawa)—MINING DEVELOPMENT — Attawapascat Mining Syndicate Ltd., Central Patricia, mining development. $40,000.

Ont. Dryden—PLANT—Dryden Paper Co., Ltd., Duke St., plant. About $61,000.

Ont., Fort Erie—MINING—Chesco Mines Ltd., c/o E. W. Tyrrie, K.C., Fort Erie, mining development. $90,000.

Ont., Hamilton — PLANT — Clear Lake Lumber Co. Ltd., Hamilton, c/o N. W. Byrne, K. C., lumber plant, sawmill, etc. $50,000.

Ont., Hamilton — FACTORY — Niagara Paint & Chemical Co. Ltd., Hamilton, paint, varnish, shellac factory. $40,000.

Ont., Hastings—PLANT—Hastings Village Co-Operative Assn., Hastings, cereals, fruits and vegetables, etc., processing plant. $40,000.

Ont., Kitchener—FACTORY—Nival Products Ltd., c/o G. H. Lochhead, K. C., Kitchener, factory. $40,000.

Ont., Kitchener—PLANT—Wellesley Farm Products Ltd., c/o F. H. Schneider, Kitchener, processing plant, farm products, etc. $50,000.

Ont., Larder Lake—DIAMOND DRILLING—Mary Ann Mines Ltd., Larder Lake, diamond drilling. $90,000. J. Messer, c/o owner, engr.

Ont., Leaside (Postal Dist. Toronto)—PLANT—Corning Glass Works, 718 5 Ave., New York, N. Y., altering bldg. for glass-baking ware mfg. plant. $40,000.

Ont., Lucknow—PLANT—Treleaven Milling Co. Ltd., Lucknow, mfg. and processing plant. $40,000.

Ont., Lyndhurst—PLANT—Lyndhurst Co-Operative Assn., Lyndhurst, fruits, vegetables, etc. processing plant. $40,000.

Ont., New Toronto (Postal Dist. Toronto)—PLANT—W. & A. Gilbey Ltd., 18 St., plant addn., $150,000.

Ont., New Toronto (Postal Dist. Toronto)—FACTORY—Toronto Factory Propriety Ltd., 42 Osler Ave., Toronto, plans by J. A. Thatcher, 37 Cowan Ave., Toronto, factory. $40,000.

Ont., Norwich—PLANT—Norwich District Co-Operative, Norwich, mfg. and processing plant. $40,000.

Ont., Orillia—PLANT—W. Kleby & Son, Ltd., plant mfg. and producing and otherwise prepare babbitt, brass, aluminum, etc. $40,000.

Ont., Peterborough — PLANT — Standard Farm Products Ltd., Peterborough processing plant, farm products. $50,000.

Ont., Petrolia — FACTORY — Allan Hay Siding Ltd., Petrolia, factory.

Ont., Picton — WAREHOUSE — Hanover Transport, Durham St., Walkerton, plans completed by C. W. Smith, 602 Jane St., Toronto, 47 x 100 ft. transport warehouse, 16 x 45 ft. office, each 1 story, with bsmnt. under office, steel frame, concrete block fdn., walls, rein.-con. loading deck. $75,000.

Ont., Porcupine—DIAMOND DRILLING—Edgewater Porcupine Gold Mines Ltd., Porcupine, diamond drilling on Night Hawk Lake. $75,000. E. K. Fockler, c/o owner, engr.

Ont., Red Lake—DIAMOND DRILLING—Detroncana Red Lakes Mines, Ltd., Red Lake, diamond drilling and surface work. $75,000. W. Hesse, c/o owner, engr.

Ont., Red Lake—DIAMOND DRILLING, etc.—Marcus Gold Mines, Red Lake, diamond drilling and srface work. $135,000.

Ont., Ridgetown—PLANT—Kent and Elgin Potato Co-Operative, Ridgetown, processing plant. $40,000.

Ont., Thessalon—MILL—Pennington Lumber Co. Inc., Thessalon, hardwood mill, etc. $40,000.

Ont., Timagami—DIAMOND DRILLING—Tory Hill Mines, Ltd., 403 Kent Bldg., Toronto, diamond drilling. $60,000.

Ont., Toronto—PLANT—Adamson & Morgan, archts., 3 St. Thomas St., soon lets contract 4 story, bsmnt., 59x60 ft., steel frame, 1 story, 16x40 ft., brick, steel plant bldgs., for Aulcraft Paints Ltd., 313 Symington Ave. $90,000.

Ont., Toronto—PLANT—Automatic Screw Machine Products, Ltd., H. L. Mendelson, K. C., 316 Lonsdale Rd., metal stampings and automatic screw machine products. $40,000.

Ont., Toronto—FACTORY—Bonnie Footwear, Ltd., c/o E. H. Spoon, 56 Claxton Blvd., factory, $40,000.

Ont., Toronto—FACTORY—Canadian Pad & Paper Co., Ltd., 240 Madison Ave., 1 story, brick, steel factory, in North York Twp. About $60,000. N. A. Armstrong, 19 Melinda St., archt.

Ont., Toronto — PLANT — Canadian Triangle Wire & Cable Co., Ltd., 4006 W. Dundas St., remodeling bldg. for mfg. of cable conductors, etc. $40,000.

Ont., Toronto — PLANT — Coro Canada, Ltd., 604 W. King St., remodeling disused building for mfg. enamelled rhineware, sterling silver and costume jewelry, etc.

Ont., Toronto—PLANT—Legg Bros. Engravers, Ltd., 10 St. Patrick St., plans by J. L. Thatcher, c/o owner, 3 story, 66 x 120 ft., brick, steel engraving plant, concrete fdn., 140 St. Patrick St., $60,000.

Ont., Toronto—PLANT—Presswood Bros. Ltd., 1 Macklem Ave., meat packing plant addn. $40,000.

Ont., Toronto — PLANT — Steam Electric Pistons Ltd., c/o B. H. Pickard, 324 Richview Ave., plant. $50,000.

Ont., Windsor—PLANT—Windsor Wood Industries Ltd., c/o R. J. Des Rosiers, Riverside, woodworking plant. $40,000.

Que., Chateauguay—MILL—Co-Operative de Chateauguay Agricole, Chateauguay, flour mill, etc. $45,000.

Que., Disraeli—BOILER HOUSE—J. W. Bienvenu, 9 Brulliard St., Quebec City, boiler house and mill kiln. $40,000.

Que., Jolliette — GASOLINE STATION — Supertest Petroleum Corp., Ltd., 5660 Hamilton St., Montreal, gasoline station. $40,000.

Que., Levis—FACTORY—Standard Woodenware, Ltd., 92 Commercial St., Levis, factory. $50,000.

Que., Montreal—PLANT—Associated Buttons & Novelties Ltd., c/o E. O. Freedman 10 Ontario St., buttons, costume jewelry, hair ornaments, etc., mfg. plant. $40,000.

Que., Montreal — PLANT — Canada Ply-Craft Corp., c/o M. Salmon, K.C., University Tower Bldg., plant. $45,000.

Que., Montreal — FACTORY — Donovan Plastics Products Ltd., c/o H. W. Jackson, 1620 Cedar St., factory.$50,000.

Que., Montreal—FACTORY—Grant Photo Products Ltd., c/o E. B. Fairbanks, K. C., Mount Royal, factory. $40,000.

Que., Montreal — PLANT—Kresno-Stamm Mfg. Co. Canada, Ltd., c/o M. Liverman, KC, 159 W. Craig St., oil burners, etc. mfg. plant.

Que., Montreal — PLANT — Modern Age Mfg. Co. Ltd., c/o B. S. Mergler, K.C., 261 St. James St., mfg. plant. $45,000

Que, Montreal East (Postal Dist. Montreal)—PLANT—Gypsum Lime & Alabastine Canada, Ltd., Paris, Ont., plans by Archibald & Illsley, 1440 Ste. Catherine St. W., Montreal, plant addn. $40,000.

Que., Quebec City—WAREHOUSE—Commercial Equipment Ltd., D. H. Allen, pres., St. John, N. B., auto parts, machinery and equip. warehouse, St. Vallier St. $75,000.

Que., Quebec City—GARAGE—P. L. Lortie, 53 Charest Blvd., garage and installing equip. $56,400.

Que., St. Felicien—PLANT—Gagnon & Co. Ltd., Roberval, plant exten. $40,000.

Que., Ste. Gertrude—ABATTOIR, etc.—A. Mailhot, Range St. Antoine, abattoir, etc. $40,000.

BIDS ASKED

Bids Asked June 26

Conn., New Haven—GARAGE, etc.—Railway Express Agency, 219 E. 42 St., New York, N. Y., brick, steel, concrete garage and office business bldg., Union Ave. and Liberty St.

Bids Asked About July 1

Ill., Carbondale — STORAGE — Fruit Growers Exchange of Southern Illinois, L. L. Clovis, genl. mgr. Carbondale, 2 story, 57 x 147 ft., apple storage bldg., brick, concrete, incl. conveyor equip., etc. $100,000. H. K. Graf, 2825 Olive St., St. Louis 3, Mo., archt.

Bids Asked After August 1

★**N. H., North Rochester** — PLANT—Spaulding Fibre Co., Inc., North Rochester, rebuilding fibre plant, $750,000. F. Smith, 21 E. 40 St., New York, N. Y., etc. CD 3/5—ENR 3/8.

Bids Asked

Conn., Waterbury — FACTORY — Colonial Plastic Products Co., 70 W. Liberty St. (selected bidders), 2 story, 25x50 ft., and 25x35 ft. brick, steel factory addn. Benedict and West Liberty Sts. $40,000. E. J. Richmond, 174 Grand St., archt.

Md., Silver Springs—BOTTLING PLANT etc.—Canada Dry Ginger Ale, Inc., 100 E. 42 St., New York, N. Y., bottling plant and warehouse. $100,000. R. G. and W. M. Cole, 1775 Bway., New York, N. Y., archts.

Mass., Cambridge—TRUCK TERMINAL etc.—Bell Terminal Co., Cambridge, (selected list bidders) truck terminal and garage. To exceed $40,000. D. Wexler, 1 Somerset St., Boston, archt.

N. Y., New York—FACTORY—Penn Bee Realty Corp., J. Badovsky, pres., 2420 Manida St., 2 story, 20x60 ft. factory, 2420 Manida St. $56,000. J. Eckmann, 17 E. 16 St., Zone 17, archt. CD 5/21—ENR 5/17 under Postwar Projects.

Wis., Marinette—WAREHOUSE—Ansul Chemical Co., Marinette, 1 story, 50x120 ft. warehouse, 1 story, 50 x240 ft. factory, concrete blocks, concrete fdns.

LOW BIDDERS

N. J., Camden—PLANT—Earl R. Lippincott Co., 103 N. 7 St., Phila., Pa., plans from G. Bachmann, Jr., 31 N. 30 St., $61,491. F. H. Radey, 101 N. 7 St., archt.

Wis., Appleton—WAREHOUSE, etc.—Gilbert Bond Rfg. Co., 918 N. Union St., 1 story bsmnt., 103x243 ft., brick, concrete tile, steel warehouse-office bldg., concrete fdn., from Miron & St. Aubin Const. Co., 139 N. State Ave. CD 3/28—ENR 4/5.

CONTRACTS AWARDED

Calif., Bakersfield—PLANT—Kern Ice & Cold Storage Co., 120-30 St., 140x270 ft. cold storage plant, 120-30 St., to J. V. Harvey, 1114 Stockton St., approx. $53,000.

Calif., Huntington Park—WAREHOUSE, etc.—International Harvester Co., 5700 Bickett St., 70x126 ft., steel, stucco warehouse, 100x127 ft., frame, stucco factory bldg., and 37x67 ft., frame, stucco office bldg., to Flick & Wayman, 6818 Seville Ave., approx. $75,000. W. M. Bostock, 2534 Live Oak Ave., engr.

Calif., Oakland—PLANT—Owens Illinois Glass Co., 601 36th Ave., Oakland, plant alterations, to H. H. Robertson Co., 68 Miles Bldg., San Francisco. Est. $56,808.

Calif., San Jose—PLANT—C. L. Dick Co., 405 N. 1 St., four-tunnel, 100x180 ft., concrete block, etc. dehydrating plant, to L. Jones c/o owner. Est. $50,000.

Calif., Vernon—FACTORY—U. S. Spring & Bumper Co., 4951 Alcoa Ave., steel frame farm tool factory. Owner builds, $85,000.

Colo., Denver — PLANT — Denver Glass Bottle Co., 3557 Wazel St., 1 and 2 story 60 x 100 ft. and 56 x 60 ft., steel frame, cinder block wall, glass bottle mfg. plant, to Metz & Mount Const. Co., Denver. Natl. Bldg., approx. $40,000. Bids 5/28. CD 5/18—ENR 5/24.

Conn., Bristol—STORAGE—New Departure Div., General Motors Corp., 269 N. Main St., brick, steel storage facilities to Edwin Moss & Son, Inc., 555 Grant St., Bridgeport. Est. over $40,000. CD 5/21—ENR 5/24.

Conn., Hartford—FACTORY—Arrow, Hart & Hegeman Elec. Co., 103 Hawthorne St., 2 story addn. Broad St. plant, etc., to Wadhams & May Co., 15 Lewis St. Est. over $40,000.

Conn., Plainville — PLANT — Michael A. Hollis, 318 Farmington Ave., quick freezing plant, locker sys., turkey freezing space, Farmington Ave., to F. Walker, 2493 Albany Ave., West Hartford. Est. $40,000. CD 6/13.

Conn., Stratford—WAREHOUSE—Raybestos Div. Raybestos-Manhattan, Inc., 75 E. Main St., brick, steel, concrete warehouse, E. Main St., to Alton & Lenhart, 1648 Post Rd., Fairfield. Est. $40,000.

INDUSTRIAL BLDGS. (Contracts Awarded, Con't.)

Ga., Atlanta—COLD STORAGE—American Service Co., E. L. Gunn, Jr., mgr., 878 Memorial Dr., 1 story, brick, concrete, steel cold storage bldg., to Hardin & Ramsey, 161 Spring St. Bldg., **$45,000.**

Ga., Atlanta—FREIGHT DEPOT—Atlantic States Motor Lines, Inc., 315 North Ave. N.E., 2 story, stone, brick, steel freight depot, day labor. **$40,000.** CD 6/15.

Mass., Springfield — PLANT — Westinghouse Electric & Mfg. Co., 653 Page Blvd., East Springfield, two 29 x 100 ft. addns. to Q Bldg., two 20 x 128 ft. addns. to J Bldg., all brick, concrete. Page Blvd., East Springfield, to Ley Constr. Corp., 1215 Main St. **$76,500.** Bids 1/15, CD 12/18—ENR 12/21.

Mass., Worcester—FACTORY—Independent Plating Co., 175 Union St., 2 story, 30x170 ft., brick, steel factory, own forces. **$45,000.** J. D. Hulsander, 14 Chalmers Rd., archt.

Mo., St. Louis — FACTORY — Southern Equipment Co., 5017 S. 38 St., Zone 16, 1 story, 120 x 150 ft., steel joists, brick factory, 5201 S. 38 St., concrete fdn., to L. O. Stoecker Co., Arcade Bldg., 806 Olive St., Zone 1. Est. about **$40,000.** E. J. Lawler, Arcade Bldg., 806 Olive St., Zone 1, archt.

N. Y., Blissville—FACTORY—Van Iderstine Co., R.R. and Greenpoint Ave., Long Island City, 60x130 ft. factory, on Newtown Creek near Greenpoint Ave., separate contracts. **$70,000.** J. Berman, 24-16 Bridge Plaza S., Long Island City, archt.

N. Y., Brooklyn—GENERATOR HOUSE—Brooklyn Union Gas Co., 176 Remsen St., altering generator house at Greenpoint Works, to United Engrs. & Constructors, 1401 Arch St., Phila., Pa., **$250,000.** CD 5/17—ENR 5/24.

★**N. Y., Deferiet**—MILL—St. Regis Paper Co., 230 Park Ave., New York, paper and pulp mill, brick, steel, to George A. Fuller Co., 597 Madison Ave., New York. Est. **$3,000,000.** CD 1/9—ENR 1/11.

O., Columbus—FACTORY—Fisher Body Co. Div. General Motors Corp., General Motors Bldg., T. P. Archer, genl. mgr., excavation for proposed factory. Georgeville Rd. and W. Broad St., to Manger Const. Co., 8 E. Long St., Columbus, and drainage for same, to National Engrg. Co., 18863 Rivercliff Dr., Cleveland, **$70,000.** Bids 5/23.

★**O., Tiffin**—PLANT—General Electric Co., 1635 Bway., Fort Wayne, Ind., design, construction fractional horse power motor mfg. plant, to Austin Co., 11612 Euclid St., Cleveland. Est. **$5,000,000.**

O., Toledo—PLANT—Swartzbaugh Mfg. Co., 1336 W. Bancroft St., west side of plant alterations, addns., to George W. Lathrop & Sons, Inc., 1510 Montcalm St. Est. **$40,000.**

O., Youngstown—PLANT BLDG.—Youngstown Sheet & Tube Co., Stambaugh Bldg., 1 story plant restaurant, for employees of Brier Hill Plant, to Heller Murray Co., 222 W. Rayen Ave., **$45,470.** Awarded 6/7.

Ore., Myrtle Creek — PLANT — Myrtle Creek Lumber Co., Myrtle Creek, 100x200 ft. plywood plant bldg., day labor. **$75,000.** CD 5/7—ENR 5/10.

Pa., Pittsburgh — PLANT — Pittsburgh Equitable Meter Co., 400 Lexington Ave., 1 story, 114 x 208 ft., brick, steel, 3rd story shop addn. Bendix Bldg. mfg. plant, to E. H. Martin, 513 N. Homewood Ave. Est. **$50,000.** Franklin & Brown, H. C. Douden, Assoc., 729 Maryland Ave., archts.

Pa., Somerton—SHOP, etc.—Veit & Young St. and Chelton Ave., Phila., shop and office bldg., to H. C. Grau, Jr., 4019 Sansom St., Phila., **$40,000.** Awarded 6/11.

Wash., Hoquiam—PLANT—Rayonier, Inc., White Bldg., 4 and Union Sts., Seattle, Zone 1, pulp plant addns., alterations, day labor. **$45,000.**

Wis., Appleton—MACHINE SHOP—Appleton Machine Co., 618 S. Oneida St., 1 story, 90x200 ft., structural steel, brick machine shop addn., to Hoffman Const. Co., 1519 N. Oneida St. Orbison & Orbison, 206 W. College Ave., engrs.

Wis., Appleton — FACTORY — Fox River Valley Knitting Co., 808 W. Wisconsin St., 1 story, bsmnt., 71x71 ft., rein.-con., brick factory addn., concrete fdn., to Miron & St. Aubin Const. Co., 139 N. Story St. R. N. DeVee & Assoc., 203 E. College Ave., archts.

Wis., Fond du Lac—FACTORY—Combination Door Co., Military St., 2 story, 50x50 ft., brick, steel factory addn., concrete fdn., to Immel Co., 101 S. Main St. F. J. Stepnoski & Son, 104 S. Main St., archt.

Wis., Green Bay—FACTORY—Larson Co., 314 N. Bway., 1 story, 78x98 ft., concrete block packing room addn. to canning factory, day labor. CD 4/18—ENR 4/26.

★**Wis., Green Bay**—POWER PLANT—Wisconsin Pub. Serv. Corp., Bellin Bldg., substructure for power plant addn. to C. R. Meyer & Sons Co., 50 State St., Oshkosh. Total est. **$3,000,000** for bldg. and equip. Public Utility Engrg. & Service Corp., 231 S. La Salle St., Chicago, Ill., engr. CD 4/11—ENR 4/12.

Wis., New London — WAREHOUSE — American Plywood Corp., New London, 1 story, 100x100 ft., concrete block warehouse, concrete fdn., day labor. CD 1/23—ENR 1/25.

Alaska, Fairbanks — LAUNDRY — Fairbanks Laundry Co., Fairbanks, 1 story, 70 x 90 ft., rein.-con. laundry, to J. B. Warrack Co., Securities Bldg., Seattle 1, Wash. Est. **$60,000.** CD 3/12—ENR 3/15.

Man., Winnipeg—PLANT—North Star Cold Storage Co., Ltd., W. L. Anderson, mgr., 128 Adelaide St. W., 1 story, 35 x 47 x 66 ft. brick plant, to Commonwealth Const. Co. Ltd., Royal Bank Bldg., about **$73,400.**

Newfoundland, Corner Brook — PLANT — Newfoundland Dehydration Process Co., Ltd., St. John's, fish processing plant, to Newfoundland Engineering & Constr. Co., Ltd., St. John's. Est. **$50,000.**

Ont., Etobicoke—PLANT—Pneumatic Insulating Co. Ltd., 24 Adelaide St. E., 1 story, 74 x 212 ft., part 2 story, 24 x 50 ft. rock wool plant, brick, rein.-con. structural steel, Lakeshore Dist., to F. W. McLachlan, 1041 Avenue Rd., Toronto, about **$100,000.**

UNCLASSIFIED

PROPOSED WORK

Arkansas—ELECTRIC SERVICE—Carroll Electric Cooperative Corp., Berryville, electric service extens., Carroll Co. $50,000.

Arkansas — ELECTRIC SERVICE — Clay County Electric Cooperative Corp., Corning, electric service extens., Clay Co. $135,000.

★**†Calif., Santa Ana** — AIRBASE BLDG. CONVERSION—U. S. Eng., 751 S. Figueroa St., Los Angeles, conversion barracks for convalescent hospital, at Santa Ana Army Air Base. $616,230.

Conn., Middletown—SWIMMING POOL—City, G. Misenti, chn. Park Dpt., preparing plans concrete swimming pool. $37,700. J. F. Lynch, 654 Savin Ave., West Haven, engr. CD 1/18—ENR 1/25.

Florida — ELECTRIC SERVICE — Choctawhatchee Electric Co-operative Inc., De Funiak Springs, electric service extens., Walton Co. $50,000.

Florida — ELECTRIC SERVICE — Glades Electric Cooperative Inc., Moore Haven, electric service extens., Glades Co. $215,000.

Florida — ELECTRIC SERVICE — Gulf Coast Electric Co-operative Inc., Panama City, electric service extens., Bay Co. $100,000.

Georgia—ELECTRIC SERVICE—Tri County Electric Membership Corp., Gray, electric service extens., Jones Co. $50,000.

Indiana—ELECTRIC SERVICE—Daviess-Martin REMC, Washington, electric service exten., Daviess Co. $50,000.

Iowa—ELECTRIC SERVICE—Buchanan County Rural Electric Cooperative, Independence, electric service extens., Buchanan Co. $75,000.

Iowa — ELECTRIC SERVICE — Cherokee County Rural Elec. Coop., Cherokee, electric service exten., Cherokee Co. $50,000.

Iowa — ELECTRIC SERVICE — D.E.K. Rural Electric Co-operative, Estherville, electric service extens., Emmet-Dickinson Counties. $75,000.

Iowa — ELECTRIC SERVICE — Guthrie County Rural Electric Co-Operative Assoc., Guthrie Center, electric service extens., Guthrie Co. $125,000.

Iowa — ELECTRIC SERVICE — Hancock Co. Rural Electric Coop., Garner, electric service exten., Hancock Co. $45,000.

Iowa—ELECTRIC SERVICE—Lyon Rural Elec. Coop., Rock Rapids, electric service exten., Lyon Co. $75,000.

Iowa — ELECTRIC SERVICE — Southern Iowa Elec. Coop. Inc., Bloomfield, electric service extens., Davis Co. $100,000.

Kentucky — ELECTRIC SERVICE — Blue Grass Electric Co-Operative Corp., Nicholasville, electric service extens., Jessamine Co. $50,000.

Kentucky—ELECTRIC SERVICE—Clark Rural Electric Coop. Corp., Winchester, electric service exten., Clark Co. $50,000.

Kentucky—ELECTRIC SERVICE—Henderson Union Rural Elec. Coop. Corp., Henderson, electric service exten., Henderson and Union Counties. $60,000.

Kentucky—ELECTRIC SERVICE—Jackson Co. Rural Elec. Coop. Corp., McKee, electric service exten., Jackson Co. $50,000.

Kentucky — ELECTRIC SERVICE — Licking Valley Rural Electric Co-operative Corp., West Liberty, electric service extens., Morgan Co. $50,000.

Kentucky — ELECTRIC SERVICE — Owen County Rural Electric Co-operative Corp., Owenston, electric service extens., Owen Co. $50,000.

Kentucky — ELECTRIC SERVICE — Salt River Rural Electric Cooperative Corp., Bardstown, Ky., electric service extens., Nelson Co. $50,000.

Kentucky—ELECTRIC SERVICE—Shelby Rural Elec. Coop. Corp., Shelbyville, electric service exten., Shelby Co. $50,000.

Kentucky — ELECTRIC SERVICE — So. Kentucky Rural Elec. Coop. Corp., Somerset, electric service exten., Wayne Co. $50,000.

Kentucky—ELECTRIC SERVICE—Taylor Co. Rural Elec. Coop. Corp., Campbellsville, electric service exten., Taylor Co. $50,000.

★**Mass., Haverhill**—AIRPORT—City, Municipal Airport Comn., City Hall, municipal airport, landwork, runways, bldgs., etc., Chadwick Rd., Kingsbury and Hyatt Aves. $500,000.

Mass., Salem — PARKING AREA — City Parking & Traffic Comn., City Hall, 500 car parking area from Washington to Peter Sts. $200,000.

Minnesota—ELECTRIC SERVICE—Peoples Coop. Power Assoc. of Olmsted Co., electric service exten., Olmsted Co. $154,000.

Mississippi—ELECTRIC SERVICE—Southwest Mississippi Elec. Power Assoc., Lorman, electric service exten., Copiah Co. $50,000.

Missouri—RURAL ELECTRIC DISTRIBUTION LINES, etc.—Black River Electric Cooperative, E. W. Fitz, pres., Ironton, soon lets contract 76.7 mi. rural electric distr. lines, as 3 separate extens. in Dent, Iron, Reynolds, Washington and Wayne Counties. Michael Drazen & Associates, 4903 Delmar Blvd., St. Louis, Zone 8, engr. CD 11/16—ENR 11/30, under Postwar.

Missouri—ELECTRIC SERVICE—Pemiscot-Dunklin Elec. Coop., Hayti, electric service exten., Pemiscot Co. $140,000.

Montana—ELECTRIC SERVICE EXTENSIONS—Missoula Electric Cooperative, Inc., Missoula, electric service extens., Missoula Co., $50,000.

Nebraska—ELECTRIC SERVICE EXTENSIONS—Midwest Electric Membership Corp., Grant, electric service extens., Perkins Co., $400,000.

North Carolina — RURAL ELECTRIC LINES—Cornelius Elec. Memb. Corp., B. A. Washam, supt., Cornelius, 90 mi. rural lines, Mecklenburg Co., $119,000.

North Carolina—RURAL LINES—Randolph Elec. Membership Corp., Asheboro, exten. rural electric lines, Randolph Co. $85,000.

North Carolina—RURAL ELECTRIFICATION SYSTEM—Surry-Yadkin Elect. Membership Corp., Dobson, 241 mi. rural electrification lines, serving 789 customers, Surry and Yadkin Counties. $327,000. REA.

North Carolina—RURAL LINES—Wake Electric Membership Corp., Wake Forest, 129 mi. new lines, Wake Co. $186,000. CD 6/13.

UNCLASSIFIED (Proposed Work, Cont'd.)

North Carolina—RURAL LINES—Woodstock Elect. Membership Corp., Belhaven, 163 mi. rural lines, Beaufort Co. $230,000.

Oklahoma—ELECTRIC SERVICE—Alfalfa Electric Cooperative Inc., Cherokee, electric service extens., Alfalfa Co. $125,000.

Oklahoma—ELECTRIC SERVICE—Peoples Electric Co-Operative Ada, Okla., electric service extens., Pontotoc Co. $140,000.

★**Oregon**—ELECTRIC SERVICE—Wasco Electric Cooperative, Inc., The Dalles, electric service extens., Wasco Co. $692,000.

Ore., Portland—RADIO STATION—Westinghouse Radio Stations, Inc., 815 S.W. Yamhill St., plans by P. Belluschi, 2040 S.W. Jefferson St., remodeling for radio station, Main St., between 12 and 13 Sts. $100,000.

Texas — ELECTRIC SERVICE — Bailey County Electric Cooperative Assoc., Muleshoe, electric service extens., Bailey Co. $150,000.

Texas — RURAL ELECTRIC LINES — Cherokee County Electric Coop. Assn., Rusk, rural electric line extens., Cherokee Co. $110,000 REA allot.

Texas — ELECTRIC SERVICE — Dickens County Electric Cooperative, Inc., Spur, electric service extens., Dickens Co. $100,000.

Texas — ELECTRIC SERVICE — Kimble Electric Cooperative, Inc., Junction, electric service extens., Kimble Co. $100,000.

Texas—ELECTRIC SERVICE—Stamford Electric Cooperative, Inc., Stamford, electric service extens., Jones Co. $100,000.

Wisconsin—RURAL ELECTRIC DISTRIBUTION SYSTEM—Adams-Marquette Elec. Coop., Friendship, electric distr. sys., REA Proj. Wis. 55-Adams, $35,000 REA allot. Wis. Elec. Coop., 303 E. Wilson St., Madison, Zone 3, engr.

Wis., Manitowoc—STEAM MAIN—Manitowoc Pub. Utilities, R. E. Casanard, mgr., steam main from municipal plant to Washington St. $145,000.

B. C., Vancouver—WHARF, etc.—Glaspie Lumber Co. Ltd., Burrard Inlet, wharf, etc. $30,000.

B. C., Vancouver—SKATING RINK, etc. —Vancouver Parks Bd., Stanley Park, skating and curling rink. Over $150,000.

N. B., Cape Tormentine—CAR FERRY TERMINALS—Dominion Govt., Ottawa, Ont., car ferry terminal addns. $50,000. Dpt. P. Wks., Ottawa, Ont., engrs.

N. W. T., Yellowknife—MINE DEVELOPMENT—West Bay Yellowknife Mines, Ltd., 371 Bay St., Toronto, Ont., mine development. $75,000.

North West Territory, Yellowknife—WHARF—Imperial Oil Ltd., Sarnia, Ont., wharf, Yellowknife Bay. $35,000.

Ont., Brampton—PIPELINE—B. A. Oil Co. Ltd., Royal Bank Bldg., Toronto, Imbedding pipeline in bed of Lake Ontario. $40,000.

Ont., Breslau—STREET LIGHTING SYSTEM—Waterloo Twp., Breslau, street lighting sys. $35,000.

Ont., Port Stanley—TANKS, etc.—McManus Petroleum, Ltd., Port Stanley, tanks, etc., two 8 in. gas pipelines under town streets. $50,000. Maturity this year. CD 9/8—ENR 9/21, under Postwar.

Que., Jonquiere—RADIO STATION—Radio Saguenay Ltd., Jonquiere, radio station. Over $50,000.

Que., Montreal—PARK DEVELOPMENT —Municipality, public park development, Notre Dame de Grace Ward and at Coronation and Doherty Aves. $50,000.

Que., Thurso—DAM—Singer Mfg. Co., Ltd., St. John's, dam on White Fish River. $45,000.

BIDS ASKED

Bids Asked After June 20

†**La., Opelousas**—AIRPORT—Civil Aeronautics Admin., P. O. Box 1689, Fort Worth 1, Tex., airport, Proposal No. 4-45-50S2. CD 6/13.

Bids Asked June 26

Mass., East Boston (sta. Boston)—RUNWAY TEST SECTION—Commonwealth of Massachusetts, Dpt. P. Wks., 100 Nashua St., Boston, constructing and testing, runway test sect., General Logan Airport.

★†**N. Y., West Point**—DAM—U. S. Eng., 120 Wall St., New York, Zone 5, concrete dam $500,000. CD 5/29—ENR 6/7, under WW.

Bids Asked July 2

Tex., Henderson—AIRPORT—Rusk Co., c/o County Judge, Henderson, airport, incl. hangars, site imprvs., grading, miscellaneous work. Plans deposit $25. Carter & Burgess, 415 Century Bldg., Fort Worth, engrs.

Bids Asked July 5

Calif., San Francisco—FENDER LINE—State Harbor Bd. Comrs., Ferry Bldg., repairing fender line on north side of Pier 33. Plans deposit $10. CD 6/13.

Bids Asked July 5

Calif., San Francisco—FERRY SLIP DOLPHINS—State Harbor Bd. Comrs., Ferry Bldg., wrecking, removing ferry slip dolphins for fleet landing facilities, Ferry Bldg. Plans deposit $10.

Bids Asked July 6

★†**Pa., Avoca**—AIRPORT GRADING, etc. —Civil Aeronautics Admin., 385 Madison Ave., New York 17, N. Y., grading, drainage at airport. CD 6/13.

Bids Asked

N. H., Portsmouth—COMFORT STATION —City, Dpt. P. Wks., City Hall, 1 story, 25 x 45 ft., brick comfort station. $25,000. Alfred T. Granger Associates, Main St., Hanover, archts. CD 5/16—ENR 5/24.

LOW BIDDERS

★**Calif., Long Beach**—WHARF, etc.—City Harbor Dpt., 1333 El Embarcadero, June 8, constructing wharf, other imprvs., at Berths 4, 5, 6 and 7, Pier A, Schedule A, asphalt concrete pavement only, from Sully-Miller Contg. Co., 1500 W. 7 St. **$211,713***** Schedule B, track work, from Sharp & Fellows & Wm. A. Smith Constr. Co., 108 W. 6 St., Los Angeles, **$139,057***** Schedule C, general contract, concrete work and all work in addns. to Schedule A and B, from E. B. Bishop, Orland, **$677,155***** Schedule D, Schedules A, B and C combined, from Warren-Southwest, Inc., 2145 E. 25 St., Los Angeles, **$1,097,721.** R. R. Shoemaker, 1333 El Embarcadero, engr. CD 5/22—ENR 5/24.

†**D. C., Anacostia**—AIR STATION LABORATORY—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash. 25, D. C., June 15, photo laboratory addn., Naval Air Station, NOY 11877, from Cramer-Vollmerhausen, 2601 Connecticut Ave. N.W., Wash., **$94,985.** CD 6/11.

Ill., Chicago—LANDSCAPING—City, Dpt. P. Wks., City Hall, June 11, landscaping Park Fill and Filter Plant Approach, South District Filtration Plant, from Chatham Paving Co., 7050 S. Wabash St., **$169,630.** CD 6/5.

†**Oregon**—TRANSMISSION LINE—Bonneville Power Admin., 1300 N.E. Union Ave., Portland, June 11, clearing 42 mi. right-of-way for Alabama-Toledo transmission line, Linn, Benton and Lincoln Counties, Inv. 3345, from W. C. Thompson, 2801 3 St., San Francisco, Calif., **$141,250.** CD 5/15—ENR 5/17.

★†**Tex., Fort Worth**—RUNWAY—U. S. Eng., 231 Main St., Denison, June 14, extra heavy duty concrete runway at Fort Worth Army Airfield, from Texas Bitulithic Co., Box 5297, Dallas, **$1,935,000.** CD 6/5—ENR 6/7.

Wash., Seattle—AIRPORT GRADING, etc. —Port of Seattle, Col. W. C. Bickford, port mgr., Bell St. Terminal, June 8, grading, drainage, seeding approaches Seattle-Tacoma Airport, from N. Fiorito Co., 844 W. 48 St., Zone 7, **$85,610.**

CONTRACTS AWARDED

†**California**—RAILROAD CONNECTION—U. S. Eng., 74 New Montgomery St., San Francisco, railroad connection to pier, California Point, Marin Co., Spec. 2056-A-7, to Piombo Bros. & Co., 1571 Turk St., San Francisco, **$416,275.** CD 6/7—ENR 6/14.

†**Calif., Oakland**—SPRINKLER PROTECTION—U. S. Eng., 74 New Montgomery St., San Francisco, sprinkler protection, Army Base, Spec. 2096, to MacDonald & Kahn, Inc., 200 Financial Center Bldg., San Francisco, **$140,700.** CD 5/28—ENR 5/31.

★†**Calif., Sacramento** — AIR DEPOT BLDGS.—U. S. Eng., 1209 8 St., Sacramento, Zone 8, 4 warehouses, paving, utilities at Sacramento Air Depot, Spec. 1120, to Moore & Roberts, 693 Mission St., San Francisco, **$1,154,304.**

†**Calif., Santa Rosa**—AVIATION LIGHTING—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash. 25, D.C., installing aviation lighting at Auxiliary Air Station, Spec. 15755, NOY 11445, to Scott Electric Co., 576 22 St., Oakland, **$38,944.** CD 5/11.

†**Calif., Van Nuys**—SWIMMING FACILITIES—U. S. Eng., 751 S. Figueroa St., Los Angeles, swimming facilities at Birmingham General Hospital, to Zoss Constr. Co., 1027 N. Cole Ave., Los Angeles, approx. **$70,000.**

★**Colorado and Wyoming** — PIPELINE CARRIER—Utah Oil Refining Co., Utah Oil Bldg., Salt Lake City, Utah, and Wamsutter, Wyo., 60 mi. 10 in. crude oil pipeline carrier between Rangely, Colo. and Wamsutter, Wyo., to Sharman & Allen, Oil & Gas Bldg., Houston, Tex., approx. **$410,000***** 41 mi. crude oil pipeline carrier and gathering lines in Rangeley, Colo. area, to Anderson Bros. Constr. Co., Natl. Bank of Commerce Bldg., Tulsa, Okla., approx. **$286,000***** 50 mi. 10 in. crude oil pipeline carrier between Rangeley, Colo. and Wamsutter, Wyo., also incl. taking 18 mi. 4 in. pipe, to R. H. Fulton Co., 2201 Esperson Bldg., Houston, Tex., approx. **$388,000.** Grand total approx. **$1,084,000.** Bids 5/21. CD 4/24—ENR 4/26.

Conn., Norwalk—PARK IMPROVEMENTS —City, R. Oliver, mayor, City Hall, Mathews Park imprvs., incl. tennis courts and play area, asphalt surfacing. Owner bonds **$25,000.**

†**Ga., Atlanta**—SWIMMING POOL—U. S. Eng., Post Office Bldg., Savannah, 50x100 ft. swimming pool and filter plant at Lawson General Hospital, to Mion Constr. Co., 377 Techwood Dr., **$66,466.**

†**Maine**—RUNWAY SEALING—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash. 25, D.C., sealing runway and other areas, N.A.A.F. Sanford and Lewiston, NOY 12685, to Lane Constr. Corp., 9 Colony St., Meriden, Conn., **$29,823;** at N.A.S. Brunswick, N.A.A.S., Sanford, N.A.A.F. Lewiston and Rockland, NOY 12222, to W. H. Hinman, Inc., North Anson, **$49,160.** CD 4/2

★**Mass., East Boston (sta. Boston)**—AIRPORT FILL, etc.—Commonwealth of Massachusetts, Dpt. P. Wks., 100 Nashua St., Boston, approx. 12,000,000 cu. yd. fill and general airport construction work, to Gahagan Constr. Corp., 90 Broad St., New York 4, N. Y. Est. **$3,000,000.**

†**N. M., Clovis**—PARKING APRONS—U. S. Eng., Albuquerque, addnl. parking aprons at airbase, to Western Contg. Co., 400 Wannock Bldg., Sioux City, Ia., **$175,711.**

†**N. C., Asheville**—SWIMMING POOL—U. S. Eng., Post Office Bldg., Savannah, Ga., 50x100 ft. swimming pool and filter plant, Moore General Hospital, to Barger Brothers, Mooresville, **$66,673.**

†**N. C., Camp Butner**—SWIMMING POOL —U. S. Eng., Post Office Bldg., Savannah, Ga., 50x100 ft. swimming pool and filter plant, to M. B. Kahn Constr. Co., 714 Lady St., Columbia, S. C., **$68,652.**

†**N. C., Camp Davis** — AUTOMATIC SPRINKLER SYSTEM—U. S. Eng., Post Office Bldg., Savannah, Ga., installing automatic sprinkler sys. at Convalescent Center, to Globe Automatic Sprinkler Co., Liberty Life Bldg., Charlotte 2, N. C., **$33,816.**

†**N. C., Fort Bragg**—CLEARING ARTILLERY RANGE—U. S. Eng., Post Office Bldg., Savannah, Ga., clearing artillery range, to E. W. Grannis Co., Fayetteville, **$72,000.**

North Dakota—TRANSMISSION LINE—Verendrye Electric Co-Operative, Velva, 58 mi. transmission lines, McHenry Co., to Sorkness Constr. Co., Fargo, **$44,425.**

Tex., Garland—HANGAR—Luscombe Aircraft Corp., Garland, prefabricated hangar, to Erwin-Newman Co., Almeda Rd., Houston, approx. **$40,000.** H. B. Gleb, Texas Bank Bldg., Dallas, engr.

Que., Verdun—PARK IMPROVEMENTS—Municipality, exten. Rheaume Park, other park imprvs., day labor. **$30,000.**

Proposal Advertisements see p. 27